







INDEX OF PATENTS

RELATING TO

ELECTRICITY,

EMBRACING PATENTS ISSUED BY

THE UNITED STATES PATENT OFFICE

FROM JULY 1, 1889, TO JUNE 30, 1890.

APPENDIX No. IX.

COMPILED UNDER THE DIRECTION OF THE COMMISSIONER OF PATENTS.

282518

WASHINGTON:
GOVERNMENT PRINTING OFFICE.

' 1891.







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1891.



APPENDIX No. IX.

PART I.

CONSISTING OF A

SUB-CLASS INDEX OF ALL PATENTS

RELATING TO

ELECTRICITY

Issued from July 1, 1889, to June 30, 1890, inclusive, giving names of Inventors, and dates and numbers of Patents in each sub-class in numerical and chronological order.



CLASSIFIED INDEX

OF

PATENTS RELATING TO ELECTRICITY

FROM JULY 1, 1889, TO JUNE 30, 1890.

171. GENERATION.-6. BATTERIES-GALVANIC.

No.	NAME.	DATE.	No.	NAME.	DATE.
406,168	Hussey, C. A	July 2, 1889	418,837	Armstrong, C. G	Jan. 7, 1890
406,169	Hussey, C. A	July 2, 1889	419,633	Burnley, W	Jan. 21, 1890
406,223	Lee, J. E	July 2, 1889	419,774	Irish, W. E.	Jan. 21, 1890
406,636	Dougans, M	July 9, 1889	419,730	Stanley, L. T	Jan. 21, 1890
406,656	Lotz, F	July 9, 1889	421,081	Mehren, J. F	Feb. 11, 1890
406,726	Groswith, H		421,169	Hewett, E. M. G	Feb. 11, 1890
406,997	Delany, P. B		421,801	Willms, C. and Leibig, G. A., jr-	Feb. 18, 1890
407,781	Kookogey, W. P	July 30, 1889	422,534	Linville, J. H	Mar. 4, 1890
407,931	Hirlimann, C. J	July 30, 1889	422,925	D'Infreville, G	Mar. 11, 1890
408,138	Schoop, P	July 30, 1889	423,335	Moorthamers, L	
408,279	Williams, J. B	Aug. 6, 1889	423,594	Clark, M. M	
408,629	Kookogey, W. P.	Aug. 6, 1889	423,959	Schmauser, T	Mar. 25, 1890
409,259	Ward, G. C.		425,135	Kookogey, W. P.	Apr. 8, 1890
409,291	Kookogey, W. P		425,335	Marx, F	Apr. 8, 1890
411,400	Thompson, W. C	Sept. 17, 1889	425,959	Renard, L. M. J. C. C	Apr. 15, 1890
413,345	Kookogey, W. P.	Oct. 22, 1889	426,932	Gendron, F	Apr. 29, 1890
414,081	Roberts, I. L	Oct. 29, 1889	428,116	MacDonald, A. J.	May 20, 1890
414,220	Hussey, C. A	Nov. 5, 1889	428,684	Mason, J. H	May 27, 1890
414,317	Hussey, C. A	Nov. 5, 1889	428,781	Nowotny, J. S	May 27, 1890
414,318	Hussey, C. A	Nov. 5, 1889	428,888	Burt, E. M	May 27, 1890
414,627	Barrett, J. A	Nov. 5, 1889 Nov. 19, 1889	429,447 $429,596$	Hoencman, F. P. and W. A Beattie, J., jr	June 3, 1890 June 10, 1890
415,345 415,593	Moreton, F	Nov. 19, 1889	429,703		June 10, 1890
415,963	Enholm, O. A	Nov. 26, 1889	429,705	Siliceo, J., jr	June 10, 1890
415,905	Otto, G	Nov. 26, 1889	429,896	Felt, G. H Felt, G. H	June 10, 1890
417,290	Sperry, E. A.	Dec. 17, 1889	429,897	Felt, G. H	June 10, 1890
417,392	Mayer, E. L. and Liepmann, H.	Dec. 17, 1889	429,898	Felt, G. H	June 10, 1890
417,436	Mayer, E. L. and Liepmann, H-	Dec. 17, 1889	430,075	Hitchcock, C. A	June 10, 1890
417,458	Wolff, C. H	Dec. 17, 1889	430,279	Edison, T. A	June 17, 1890
417,814	Delany, P. B	Dec. 24, 1889	430,990	Davis, J. H	June 24, 1890
		200. 21, 1000	200,000	20,0,111	3 110 21, 1300

171. GENERATION.—72. Batteries—Secondary.

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		7			
406,267	Currie, S. C. C	July 2, 1889	410,007	McLaughlin, J. F	Aug. 27, 1889
406,439	Griscom, W. W.	July 9, 1889	410,037	Smith, F. H	Aug. 27, 1889
406,771	Riker, A. L		410,054	Waldron, C. F	Aug. 27, 1889
406,822	Dey, H. E		410,136	Carter, C. H	Aug. 27, 1889
406,916	Kitsee, I	July 16, 1889	410,680	Van Gestel, J. T	Sept. 10, 1889
406,969	Thompson, C. H	July 16, 1889	411,124	Huestis, F. W	Sept. 17, 1889
406,975	Van Gestel, J. T		411,370	Barrett, S. H	Sept. 17, 1889
408,002	Ernst, V. H		411,426	Dahl, Ó	Sept. 24, 1889
408,112	Kookogey, W. P		411,787	Currie, S. C. C	
408,287	Bottome, T. D	Aug. 6, 1889	411,786	Currie, S. C. C	
408,367	Aldrich, N. B.	Aug. 6, 1889	412,323	Currie, S. C. C	
408,666	McLaughlin, J. F	Aug. 6, 1889	412,345	Smith, W. F	Oct. 8, 1889
408,809	Meserole, A. V	Aug. 13, 1889	412,346	Smith, W. F	Oct. 8, 1889
408,986	Morris, H. G. and Salom, P. G.	Aug. 13, 1889	412,639	Lyte, F. M	Oct. 8, 1889
409,106	Kookogey, W. P.	Aug. 13, 1889	412,727	Carpenter, H. H'	
409,178	Faure, C. A.	Aug. 20, 1889	413,112	Tudor, H	Oct. 15, 1889
409,365	Mond, L. and Langer, C	Aug. 20, 1889	413,339	Eickemeyer, R	
409,366	Mond, L. and Langer, C	Aug. 20, 1889	414,438	Osburn, H. G	
409,448	Bradley, C. S	Aug. 20, 1889	414,953	Roberts, W	

171. GENERATION.—72. BATTERIES—SECONDARY—Continued.

No.	Name.	DATE.	No.	Name.	Date.
415 997	Farmed B and Dire C I	No. 10 1000	400 201	Hantmann C. I	E-1 05 1000
415,327	Kennedy, P. and Diss, C. J	Nov. 19, 1889	422,301	Hartmann, C. J	Feb. 25, 1890
415,329 415,331	Payen, C	Nov. 19, 1889 Nov. 19, 1889	422,308 422,457	Sorley, C	
415,333	Payen, C	Nov. 19, 1889	422,504	Currie, S. C. C	Mar. 4, 1890
415,490	Allen, W. H	Nov. 19, 1889	422,505	Currie, S. C. C	Mar. 4, 1890
415,600	Wotton, J. A. and Polk, W. R., jr	Nov. 19, 1889	422,533	Kookogey, W. P	Mar. 4, 1890
415,936	Bradbury, J. Y. and Stone, F. J-	Nov. 26, 1889	423,091	Sorley, C	Mar. 11, 1890
415,981	Smith; W. F	Nov. 26, 1889	423,310	Chamberlain, R. N. and J. C	
416,126	Smith, W. F	Nov. 26, 1889	423,324	Johnson, W. A. and Smith, J. N.	
416,299	Pumpelly, J. K	Dec. 3, 1889	424,152	Wardwell, H. H	
416,573	Covert, D'E. S. and Pumpelly,	Dec. 3, 1889	424,809	McLaughlin, J. F	Apr. 1, 1890
416,605	J. K.	Dec. 3, 1889	425,818 425,819	McLaughlin, J. F	Apr. 15, 1890
417,055	Hausen, M. L.	Dec. 10, 1889	425,902	MeLaughlin, J. F	
417,088	Pumpelly, J. K	Dec. 10, 1889	425,957	Philippart, G	
417,158	Ernst, V. H	Dec. 10, 1889	425,999	Epstein, L	
418,140	Osburn, H. G	Dec. 24, 1889	426,724	Heyl, G. E	Apr. 29, 1890
418,483	Woolf, A. E	Dec. 31, 1889	427,710	Smith. W. F	May 13, 1890
418,700	Dey, H. E		427,785	McLaughlin, J. F	May 13, 1890
419,727	Sorley, C		427,789	Nevins, T. F	May 13, 1890
419,728	Sorley, C		429,272	Hering, C	
419,862	Mehren, J. F		429,273	Hering, C	June 3, 1890
420,234	Johnson, G. A		429,274	Hering, C	
420,975 421,666	Sorley, C		429,912 429,913	Hering, C	
421,916	Entz, J. B. and Phillips, W. A.	Feb. 25 1890	429,914	Hering, C	
422,216	Hollingshead, W. B			Swan, J. W	
422,300	Hartmann, C. J		11,011	ecitali, or transmission	2007 11, 1000
,		2 00. 20, 2000			
	171. GENERATIO	ON.—74. BATTE	RIES—SEC	ondary—Applications.	
406,354	Kookogey, W. P	July 2, 1889	415,766	Currie, S. C. C	Nov. 26, 1889
406,978	Wallace, T	July 16, 1889	418,701	Dev. H. E	
406,981	Amory, A. and R	July 16, 1889	418,702	Dey, H. E	
410,111	Kookogey, W. P		418,703	Dey, H. E	Jan. 7, 1890
410,153	Currie, S. C. C	Sept. 3, 1889	418,748	Prescott, G. B., jr	Jan. 7, 1890
410,586	Foote, T. M	Sept. 10, 1889	420,906.	Johnson, W. S	
411,301 414,943	Ries, E. E.—————————————————————————————————	Sept. 17, 1889	422,438 424,339	Pennock, G. B MeLaughlin, J. F	
111,010	Devey, Mr. Williams	100. 12, 1009	72,000	MeLaughini, J. F	Mai. 20, 1000
	171. GEN	ERATION.—7	3. Batter	IES—THERMAL.	
412,669	Roberts, W. S. De L. and Mol-	Oct. 8, 1889	420,764	Bradley, C. S	Feb. 4, 1890
	lison, J. S.	, , , , , , , , , , , , , , , , , , , ,	425,568	Edelkamp, J	Apr. 15, 1890
	171. GEN	ERATION.—28	3. Frictio	n Generators.	,
410,053	Voss, R	Aug. 27, 1889	423,708	Tirmann, H	Mar. 18, 1890
416,662	Bartlett, S. H	Dec. 3, 1889	120,100	111111111111111111111111111111111111111	22
		· ·			
	171. G	ENERATION	-95. Gal	VANOMETERS.	
408,157	Barrett, J. A	Inly 30 1990	100 400	Warner E P	Ian 28 1800
409,207	Knowles, E. R		420,422 422,672	Warner, E. P	
412,140	Thompson, W	Oct. 1, 1889	423,600	Frei, G. A	
412,354	Wood, J. J	Oct. 8, 1889	425,068	Garver, M. M.	
413,292	Thomson, E		425,069	Garver, M. M	Apr. 8, 1890
413,338	Eickemeyer, R		426,065	Rae, F. B	Apr. 22, 1890
413,812	Ritchie, A. M.	Oct. 29, 1889	426,499	Hicks, T. H	Apr. 29, 1890
414,076	Pfannkuche, G	Oct. 29, 1889	426,992	Garver, M. M	Apr. 29, 1890
414,422	Lockwood, J. E	Nov. 5, 1889	427,022	Weston, E	
414,866	Mehren, J. F	Nov. 12, 1889	428,746	Colgate, A. E	May 27, 1890
416,654	Thompson, W	Dec. 3, 1889	429,887	Colgate, A. E	June 10, 1890
416,655	Thompson, W	Dec. 9, 1889	430,865	Leonard, H. W	June 24, 1890

171. GENERATION.—27. Induction-Coils

171. GENERATION.—27. Induction-Coils.							
No.	Name.	DATE.	No.	NAME.	DATE.		
407,618 409,714 410,468 414,266 414,626 416,762 417,923	Slattery, M. M. M. Thomson, E. and Rice, E. W., jr. Thomson, E. Barrett, J. A Thomson, E. Kneuper, F. J	Aug. 27, 1889 Sept. 3, 1889 Nov. 5, 1889 Nov. 5, 1889 Dec. 10, 1889	419,731 422,885 423,616 423,617 426,563 428,574	Stanley, L. T ——————————————————————————————————	Mar. 4, 1890 Mar. 18, 1890 Mar. 18, 1890		
	171. GENERATIO	N.—123. Induc	roriums-	TRANSFORMERS—ROTARY.			
422,746	Von Dolivo-Dobrowolsky, M			-	Mar. 4, 1890		
	171. GENERATION.	—124. Іхристо	RIUMS—TI	RANSFORMERS—STATIONARY.			
415,749 420,396 426,153 427,751	Thomson, E Thomson, E Wagemann, E De Ferranti, S. Z	Jan. 28, 1890 Apr. 22, 1890	428,575 428,618 428,648 429,583	Stanley, W., jr Lemp, H Thomson, E Pfannkuche, G	May 20, 1890 May 27, 1890 May 27, 1890 June 3, 1890		
	171. GE	NERATION.—	33. Magn	ETO-ELECTRIC.			
406,415 406,429 406,599 406,776 406,777 406,858 406,859 406,968 407,154 407,762 407,761 407,762 407,763 408,206 408,265 408,403 408,403 409,463 409,463 409,463 409,656 410,656 410,656 410,670 410,966 411,629	Andrews, W. S. and Spencer, T-Currie, S. C. C Wood, J. J Silvey, W. L Schmid, A Schmid, A Schmid, A Schmid, A Schmid, A Tesla, N Bennett, E. H., jr Loomis, O. P Acheson, E. G Acheson, E. G Acheson, E. G Acheson, E. G Sissier, H. R Short, S. H De Ferranti, S. Z De Ferranti, S. Z Van Gestel, J. T De Ferranti, S. Z Higham, D McLellan, J. M Blackwell, F. O Johnson, J. R Statter, J. G Jenney, C. D Fitch, A. S Fitch, A. S Winkler, C. F	July 9, 1889 July 16, 1889 July 16, 1889 July 16, 1889 July 30, 1889 July 30, 1889 July 30, 1889 Aug. 6, 1889 Aug. 6, 1889 Aug. 6, 1889 Aug. 6, 1889 Aug. 20, 1889 Aug. 20, 1889 Aug. 20, 1889 Aug. 20, 1889 Sept. 10, 1889 Sept. 24, 1889	415,697 415,806 416,013 416,240 416,443 416,720 417,794 418,301 418,685 418,853 419,661 420,924 421,222 421,320 421,479 421,967 422,265 422,295 422,419 422,550 422,681 422,681 422,699 423,309 423,309 423,912 424,065 424,406 425,495	Belding, W. S Belding, W. S Riker, A. L Schmid, A Cooley, W. H Dalzell, J. A Schmid, A. and Tesla, N Wood, J. J Claus, P. and Gengenbach, E Storey, I. E Gutmann, L Waterhouse, A. G Alton, G. H. and Wakefield, W. O Schmid, A. and Means, E. C Brace, De W. B Pfatischer, M Van Depoele, C. J Cooper, W. B Jenney, C. D Eickemeyer, R Thomson, E Wray, J. C Washburn, G. A Thomson, E. and Rohrer, A. L Cohen, R. L Chamberlain, J. C Diehl, P De Ferranti, S. Z Jenney, C. D Crane, W. F. D	Nov. 26, 1889 Nov. 26, 1889 Dec. 3, 1889 Dec. 3, 1889 Dec. 10, 1889 Dec. 24, 1889 Dec. 31, 1889 Dec. 31, 1889 Jan. 7, 1890 Jan. 21, 1890 Feb. 4, 1890 Feb. 41, 1890 Feb. 11, 1890 Feb. 25, 1890 Feb. 25, 1890 Feb. 25, 1890 Mar. 4, 1890 Mar. 4, 1890 Mar. 4, 1890 Mar. 4, 1890 Mar. 11, 1890 Mar. 11, 1890 Mar. 11, 1890 Mar. 11, 1890 Mar. 125, 1890 Mar. 25, 1890		
411,930 411,950 412,349 412,350 412,351 412,352 412,353 412,854 412,933 413,008 413,148 413,337 414,659 414,900 415,190 415,363 415,695 415,696	Rice, E. W., jr. and Rohrer, A. L. Atwater, A. S. Winkler, C. F. Kingdon, J. A. Shallenberger, O. B. Zipernowsky, C. Pfannkuche, G. Eickemeyer, R. Eickemeyer, R. Pfannkuche, G. Seafert, W. Geisenhöner, H. Daniels, T. E., jr Loomis, F. F. Belding, W. S. Belding, W. S.	Oct. 1, 1889 Oct. 8, 1889 Oct. 8, 1889 Oct. 8, 1889 Oct. 8, 1889 Oct. 15, 1889 Oct. 22, 1889 Oct. 22, 1889 Nov. 5, 1889 Nov. 5, 1889 Nov. 12, 1889 Nov. 12, 1889 Nov. 19, 1889 Nov. 19, 1889 Nov. 26, 1889	425,435 425,763 426,343 426,348 426,471 426,576 427,259 427,294 427,405 427,674 428,038 428,073 428,289 428,735 428,742 428,743 429,490 429,736 430,320 431,018	La Roche, F. A Edison, T. A Watson, J. A Watson, J. A Wightman, M. J. and Thomson, E Rice, E. W., jr Wenström, J Forbes, G Brace, De W. B Dewey, M Daft, L Bowen, E. H Brown, L. V Schmid, A Croasdale, E	Apr. 15, 1890 Apr. 15, 1890 Apr. 22, 1890 Apr. 22, 1890 Apr. 29, 1890 Apr. 29, 1890 May 6, 1890 May 6, 1890 May 13, 1890 May 13, 1890 May 20, 1890 May 20, 1890 May 20, 1890 May 27, 1890 May 27, 1890 May 27, 1890 May 27, 1890 June 10, 1890 June 10, 1890 June 10, 1890 June 17, 1890		

171. GENERATION.—76. Magneto-Electric—Hand-Machines.

No.	NAME.	DATE.	No.	NAME.	DATE.				
407,327	Buell, C. E	July 23, 1889	418,120	Gillett, W					
410,964	Fitch, A. S	Sept. 10, 1889	427,122	Scribner, C. E	May 6, 1890				
	171. GENERATION.—34. METERS.								
406,678	Walker, G. W	July 9, 1889	419,367	Shallenberger, O. B.	Jan. 14, 1890				
406,824 $406,825$	Edison, T. A	July 9, 1889 July 9 1889	420,214 $420,762$	Smith, W. F Bishop, J. D	Jan. 28, 1890				
407,414	McKinney, W		423,210	Blathy, O. T					
407,619	Slattery, M. M. M	July 23, 1889	424,338	McKinney, W	Mar. 25, 1890				
408,016	Knowles, E. R		424,401	Bagby, W. J. Lowrie, W., Hall, C. J. and	Mar. 25, 1890				
408,017	Knowles, E. R		424,891	Kollé, H. W.	Apr. 1, 1890				
408,295	De Ferranti, S. Z.	Aug. 6, 1889	425,269	Thompson, M. E	Apr. 8, 1890				
410,860	Slattery, M. M. M	Sept. 10, 1889	425,270	Thompson, M. E	Apr. 8, 1890				
411,042 413,038	Kolle, H. W		425,579 $425,760$	Popp, V Edison, T. A	Apr. 15, 1890				
414,339	Spaulding, H. C	Nov. 5, 1889	426,335	Shallenberger, O. B	Apr. 22, 1890				
414,595	Shallenberger, O. B	Nov. 5, 1889	427,489	Westinghouse, G., jr	May 6, 1890				
415,491	Bates, P. S	Nov. 19, 1889	427,748	Currie, S. C. C					
415,577 $415,747$	Siemens, E. W Thomson, E		427,749 428,084	Currie, S. C. C					
415,748	Thomson, E	Nov. 26, 1889	428,280	Mehren, J. F	May 20, 1890				
416,339	Lemp, H	Dec. 3, 1889	428,290	Von Siemens, E. W	May 20, 1890				
416,350 $416,604$	Thomson, E	Dec. 3, 1889 Dec. 3, 1889	428,633 428,649	Rice, E. W., jr Thomson, E					
418,472	Pratt, C. A		429,751	Barnard, J. H.					
418,559	Frager, A. J	Dec. 31, 1889	430,432	Oulton, J. and Edmondson, J	June 17, 1890				
419,264	Kennelly, A. E	Jau. 14, 1890	430,551	Wade, G. H	June 17, 1890				
428,057	•			ro—Electric Devices.	May 13, 1890				
428,057	Tesla, N				May 13, 1890				
406,493	Tesla, N	GENERATION July 9, 1889	7.—40. Ri	GULATORS. Wood, J. J	Jan. 28, 1890				
	Tesla, N	GENERATION July 9, 1889 July 9, 1889 July 16, 1889	7.—40. Re	GULATORS.	Jan. 28, 1890 Jan. 28, 1890				
406,493 406,494 406,961 407,014	Tesla, N	GENERATION July 9, 1889 July 9, 1889 July 16, 1889 July 16, 1889	420,138 420,398 420,469 420,882	Wood, J. J Waterhouse, A. G Serrell, L. W. and Lufkin, H. L. Lemp, H. and Wightman, M. J.	Jan. 28, 1890 Jan. 28, 1890 Feb. 4, 1890 Feb. 4, 1890				
406,493 406,494 406,961 407,014 407,293	Tesla, N 171. Wood, J. J Wood, J. J Schlesinger, W. M Kelly, J. F. and Brangs, P. H Higham, D	July 9, 1889 July 9, 1889 July 16, 1889 July 16, 1889 July 16, 1889	7.—40. Re 420,138 420,398 420,469 420,882 421,048	Wood, J. J Waterhouse, A. G Serrell, L. W. and Lufkin, H. L- Lemp, H. and Wightman, M. J _ Heymann, E. and F. W	Jan. 28, 1890 Jan. 28, 1890 Feb. 4, 1890 Feb. 4, 1890 Feb. 11, 1890				
406,493 406,494 406,961 407,014 407,293 407,875 408,205	Tesla, N	July 9, 1889 July 9, 1889 July 16, 1889 July 16, 1889 July 16, 1889 July 30, 1889 Aug. 6, 1889	420,138 420,398 420,469 420,882 421,048 421,053 421,195	Wood, J. J Waterhouse, A. G Serrell, L. W. and Lufkin, H. L. Lemp, H. and Wightman, M. J.	Jan. 28, 1890 Jan. 28, 1890 Feb. 4, 1890 Feb. 4, 1890 Feb. 11, 1890				
406,493 406,494 406,961 407,014 407,293 407,875 408,205 408,333	Tesla, N	July 9, 1889 July 9, 1889 July 16, 1889 July 16, 1889 July 16, 1889 July 30, 1889 Aug. 6, 1889 Aug. 6, 1889	420,138 420,398 420,469 420,882 421,048 421,053 421,195 422,862	Wood, J. J	Jan. 28, 1890 Jan. 28, 1890 Feb. 4, 1890 Feb. 11, 1890 Feb. 11, 1890 Feb. 11, 1890 Mar. 4, 1890				
406,493 406,494 406,961 407,014 407,293 407,875 408,205 408,333 410,170	Tesla, N Wood, J. J Wood, J. J Schlesinger, W. M Kelly, J. F. and Brangs, P. H Higham, D Pfannkuche, G Boissier, H. R Whittingham, G. H Loomis, O. P	GENERATION July 9, 1889 July 16, 1889 July 16, 1889 July 16, 1889 July 30, 1889 Aug. 6, 1889 Aug. 6, 1889 Sept. 3, 1889	420,138 420,398 420,469 420,882 421,048 421,053 421,195 422,862 422,975	Wood, J. J. Waterhouse, A. G. Serrell, L. W. and Lufkin, H. L. Lemp, H. and Wightman, M. J. Heymann, E. and F. W. Nutting, S. E. Ross, F. and Franzen, A. Washburn, G. A. Rice, E. W., jr.	Jan. 28, 1890 Jan. 28, 1890 Feb. 4, 1890 Feb. 41, 1890 Feb. 11, 1890 Feb. 11, 1890 Mar. 4, 1890 Mar. 11, 1890 Mar. 11, 1890				
406,493 406,494 406,961 407,014 407,293 407,875 408,205 408,333 410,170 410,663 410,896	Tesla, N Wood, J. J Wood, J. J Schlesinger, W. M Kelly, J. F. and Brangs, P. H Higham, D Pfannkuche, G Boissier, H. R Whittingham, G. H Loomis, O. P Bradford, J. M Hoffmann, R	July 9, 1889 July 9, 1889 July 16, 1889 July 16, 1889 July 16, 1889 July 30, 1889 Aug. 6, 1889 Aug. 6, 1889 Sept. 3, 1889 Sept. 10, 1889 Sept. 10, 1889	420,138 420,398 420,469 420,882 421,048 421,053 421,195 422,862 422,975 423,029 423,897	Wood, J. J. Waterhouse, A. G. Serrell, L. W. and Lufkin, H. L. Lemp, H. and Wightman, M. J. Heymann, E. and F. W. Nutting, S. E. Ross, F. and Franzen, A. Washburn, G. A. Rice, E. W., jr. Currie, S. C. C. Baxter, W., jr.	Jan. 28, 1890 Jan. 28, 1890 Feb. 4, 1890 Feb. 41, 1890 Feb. 11, 1890 Feb. 11, 1890 Mar. 4, 1890 Mar. 11, 1890 Mar. 11, 1890 Mar. 25, 1890				
406,493 406,494 400,961 407,014 407,293 407,875 408,205 408,333 410,170 410,663 410,896 411,551	Tesla, N Wood, J. J	July 9, 1889 July 9, 1889 July 16, 1889 July 16, 1889 July 16, 1889 July 30, 1889 Aug. 6, 1889 Aug. 6, 1889 Sept. 3, 1889 Sept. 10, 1889 Sept. 10, 1889 Sept. 124, 1889	420,138 420,398 420,469 420,882 421,048 421,053 421,195 422,862 422,975 423,029 423,897 423,909	Wood, J. J	Jan. 28, 1890 Jan. 28, 1890 Feb. 4, 1890 Feb. 4, 1890 Feb. 11, 1890 Feb. 11, 1890 Mar. 4, 1890 Mar. 11, 1890 Mar. 11, 1890 Mar. 25, 1890				
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406,493 406,494 406,961 407,014 407,293 407,875 408,205 408,333 410,170 410,663 411,551 411,782 411,783 412,567 412,700 412,928 413,279 413,280 413,984 414,043 414,043 414,052 414,191 415,487 415,641 416,169 416,746 417,089	Tesla, N Wood, J. J Wood, J. J Schlesinger, W. M Kelly, J. F. and Brangs, P. H Higham, D Pfannkuche, G Boissier, H. R Whittingham, G. H Loomis, O. P Bradford, J. M Hoffmann, R Harris, L. S Card, G. F Crad, G. F Tracy, P. J Elkins, W. H Macrae, R Hochhausen, W Hochhausen, W Thone, F Gutmann, L Immich, M Conant, H. J Whittingham, G. H Jaeger, C. L Keith, N. S Rice, E. W., jr Rae, F. B	July 9, 1889 July 16, 1889 Aug. 6, 1889 Aug. 6, 1889 Sept. 3, 1889 Sept. 10, 1889 Sept. 10, 1889 Sept. 10, 1889 Oct. 1, 1889 Oct. 1, 1889 Oct. 22, 1889 Oct. 29, 1889 Oct. 3, 1889 Dec. 3, 1889 Dec. 3, 1889 Dec. 10, 1889 Dec. 10, 1889	420,138 420,398 420,469 420,882 421,048 421,053 421,195 422,975 423,029 423,897 423,909 424,595 424,665 426,109 426,570 426,570 426,573 427,163 427,163 427,163 427,163 427,163 427,163 428,705 428,705 428,705 428,705 429,333	Wood, J. J — Waterhouse, A. G — Serrell, L. W. and Lufkin, H. L. Lemp, H. and Wightman, M. J. Heymann, E. and F. W — Nutting, S. E — Ross, F. and Franzen, A — Washburn, G. A — Rice, E. W., jr — Currie, S. C. C — Baxter, W., jr — Cooley, H. W — Bergmann, S. and Scott, G. B — Young, C. G — Clark, E. P — Clark, E. P — Clark, E. P — Peel, W. T — Stanley, W., jr — Stanley, W., jr — Wood, J. J — Elkins, W. H — Elkins, W. H — Warner, E. P — Pfannkuche, G Thomson, E Sprague, F. J — Bradford, J. M	Jan. 28, 1890 Jan. 28, 1890 Feb. 4, 1890 Feb. 4, 1890 Feb. 11, 1890 Feb. 11, 1890 Mar. 4, 1890 Mar. 11, 1890 Mar. 25, 1890 Mar. 25, 1890 Apr. 22, 1890 Apr. 22, 1890 Apr. 22, 1890 Apr. 29, 1890 May 6, 1890 May 27, 1890 May 27, 1890 June 3, 1890				
406,493 406,494 406,961 407,014 407,293 407,875 408,205 408,333 410,170 410,663 411,551 411,782 411,783 412,567 412,700 412,928 413,279 413,280 414,043 414,052 414,191 415,487 415,641 416,169 416,746 417,089 417,487	Tesla, N Wood, J. J Wood, J. J Seblesinger, W. M Kelly, J. F. and Brangs, P. H Higham, D Pfannkuche, G Boissier, H. R Whittingham, G. H Loomis, O. P Bradford, J. M Hoffmann, R Harris, L. S Card, G. F Card, G. F Tracy, P. J Elkins, W. H Macrae, R Hochhausen, W Hochhausen, W Thone, F Gutmann, L Immich, M Conant, H. J Jaeger, C. L Keith, N. S Rice, E. W, jr Rae, F. B Jenuey, C. D	July 9, 1889 July 16, 1889 Aug. 6, 1889 Aug. 6, 1889 Sept. 3, 1889 Sept. 10, 1889 Sept. 10, 1889 Sept. 10, 1889 Oct. 1, 1889 Oct. 1, 1889 Oct. 24, 1889 Oct. 24, 1889 Oct. 25, 1889 Oct. 22, 1889 Oct. 22, 1889 Oct. 29, 1889 Oct. 3, 1889 Oct. 3, 1889 Dcc. 10, 1889 Dec. 10, 1889 Dec. 10, 1889 Dec. 17, 1889	420,138 420,398 420,469 420,882 421,048 421,053 421,1053 422,975 423,029 423,897 423,909 424,595 426,109 426,110 426,570 426,573 427,163 427,163 427,164 427,530 428,317 428,705 428,705 428,732 429,333 429,825	Wood, J. J Waterhouse, A. G Serrell, L. W. and Lufkin, H. L. Lemp, H. and Wightman, M. J Heymann, E. and F. W Nutting, S. E Ross, F. and Franzen, A Washburn, G. A Rice, E. W., jr Currie, S. C. C Baxter, W., jr Cooley, H. W Bergmann, S. and Scott, G. B Young, C. G Clark, E. P Clark, E. P Clark, E. P Clark, E. P Peel, W. T Stanley, W., jr Stanley, W., jr Wood, J. J Elkins, W. H Elkins, W. H Warner, E. P Pfannkuche, G Thomson, E Sprague, F. J Bradford, J. M Wagemann, E	Jan. 28, 1890 Jan. 28, 1890 Feb. 4, 1890 Feb. 4, 1890 Feb. 11, 1890 Feb. 11, 1890 Mar. 4, 1890 Mar. 11, 1890 Mar. 25, 1890 Mar. 25, 1890 Apr. 1, 1890 Apr. 1, 1890 Apr. 22, 1890 Apr. 22, 1890 Apr. 22, 1890 Apr. 29, 1890 Jup. 40, 1890 May 6, 1890 May 27, 1890 May 27, 1890 June 10, 1890 June 10, 1890				
406,493 406,494 406,961 407,014 407,293 407,875 408,205 408,333 410,170 410,663 411,551 411,782 411,783 412,567 412,700 412,928 413,279 413,280 413,984 414,043 414,043 414,052 414,191 415,487 415,641 416,169 416,746 417,089	Tesla, N Wood, J. J Wood, J. J Seblesinger, W. M Kelly, J. F. and Brangs, P. H Higham, D Pfannkuche, G Boissier, H. R Whittingham, G. H Loomis, O. P Bradford, J. M Hoffmann, R Harris, L. S Card, G. F Card, G. F Card, G. F Tracy, P. J Elkins, W. H Macrae, R Hochhausen, W Hochhausen, W Hochhausen, W Hochhausen, W Hochhausen, W Hochhausen, W Konant, H. J Whittingham, G. H Jaeger, C. L Keith, N. S Rice, E. W., jr Rae, F. B Jenuey, C. D Wood, J. J	GENERATION July 9, 1889 July 16, 1889 Aug. 6, 1889 Aug. 6, 1889 Sept. 3, 1889 Sept. 10, 1889 Sept. 10, 1889 Oct. 1, 1889 Oct. 1, 1889 Oct. 1, 1889 Oct. 22, 1889 Oct. 22, 1889 Oct. 22, 1889 Oct. 22, 1889 Oct. 29, 1889 Oct. 3, 1889 Dcc. 3, 1889 Dcc. 10, 1889 Dcc. 10, 1889 Dcc. 17, 1889 Dcc. 17, 1889 Dcc. 31, 1889	420,138 420,398 420,469 420,882 421,048 421,053 421,053 421,195 422,862 422,975 423,029 423,897 424,595 424,665 426,109 426,570 426,570 426,573 427,163 427,163 427,163 427,163 427,163 427,163 427,163 427,163 427,163 427,163 427,163 427,163 427,164 427,530 428,317 428,705 428,333 429,833 429,835 430,327	Wood, J. J Waterhouse, A. G Serrell, L. W. and Lufkin, H. L. Lemp, H. and Wightman, M. J. Heymann, E. and F. W Nutting, S. E Ross, F. and Franzen, A Washburn, G. A Rice, E. W., jr Currie, S. C. C Baxter, W., jr Cooley, H. W Bergmann, S. and Scott, G. B Young, C. G Clark, E. P Clark, E. P Clark, E. P Clark, E. P Stanley, W., jr Stanley, W., jr Wood, J. J Elkins, W. H Elkins, W. H Elkins, W. H Warner, E. P Pfannkuche, G Thomson, E Bradford, J. M Wagemann, E Thomson, E. and Rice, E. W., jr	Jan. 28, 1890 Jan. 28, 1890 Feb. 4, 1890 Feb. 4, 1890 Feb. 11, 1890 Feb. 11, 1890 Mar. 4, 1890 Mar. 11, 1890 Mar. 25, 1890 Mar. 25, 1890 Apr. 1, 1890 Apr. 22, 1890 Apr. 22, 1890 Apr. 22, 1890 Apr. 29, 1890 Apr. 29, 1890 Apr. 29, 1890 Apr. 29, 1890 May 6, 1890 May 6, 1890 May 6, 1890 May 6, 1890 May 27, 1890 May 27, 1890 May 27, 1890 June 10, 1890 June 10, 1890 June 10, 1890 June 17, 1890				
406,493 406,494 400,961 407,014 407,293 407,875 408,205 408,333 410,170 410,663 411,551 411,782 411,782 411,783 412,567 412,700 412,928 413,279 413,280 414,043 414,043 414,043 414,043 414,043 414,191 415,487 415,641 416,746 417,089 417,487 418,302	Tesla, N Wood, J. J Wood, J. J Seblesinger, W. M Kelly, J. F. and Brangs, P. H Higham, D Pfannkuche, G Boissier, H. R Whittingham, G. H Loomis, O. P Bradford, J. M Hoffmann, R Harris, L. S Card, G. F Card, G. F Tracy, P. J Elkins, W. H Macrae, R Hochhausen, W Hochhausen, W Thone, F Gutmann, L Immich, M Conant, H. J Jaeger, C. L Keith, N. S Rice, E. W, jr Rae, F. B Jenuey, C. D	GENERATION July 9, 1889 July 16, 1889 July 16, 1889 July 16, 1889 July 16, 1889 Aug. 6, 1889 Aug. 6, 1889 Sept. 3, 1889 Sept. 10, 1889 Sept. 10, 1889 Oct. 1, 1889 Oct. 1, 1889 Oct. 1, 1889 Oct. 22, 1889 Oct. 22, 1889 Oct. 22, 1889 Oct. 29, 1889 Oct. 29, 1889 Oct. 29, 1889 Oct. 29, 1889 Nov. 5, 1889 Nov. 5, 1889 Nov. 19, 1889 Nov. 19, 1889 Dec. 10, 1889 Dec. 10, 1889 Dec. 10, 1889 Dec. 31, 1889	420,138 420,398 420,469 420,882 421,048 421,053 421,1053 422,975 423,029 423,897 423,909 424,595 426,109 426,110 426,570 426,573 427,163 427,163 427,164 427,530 428,317 428,705 428,705 428,732 429,333 429,825	Wood, J. J Waterhouse, A. G Serrell, L. W. and Lufkin, H. L. Lemp, H. and Wightman, M. J Heymann, E. and F. W Nutting, S. E Ross, F. and Franzen, A Washburn, G. A Rice, E. W., jr Currie, S. C. C Baxter, W., jr Cooley, H. W Bergmann, S. and Scott, G. B Young, C. G Clark, E. P Clark, E. P Clark, E. P Clark, E. P Peel, W. T Stanley, W., jr Stanley, W., jr Wood, J. J Elkins, W. H Elkins, W. H Warner, E. P Pfannkuche, G Thomson, E Sprague, F. J Bradford, J. M Wagemann, E	Jan. 28, 1890 Jan. 28, 1890 Feb. 4, 1890 Feb. 4, 1890 Feb. 11, 1890 Feb. 11, 1890 Mar. 4, 1890 Mar. 11, 1890 Mar. 25, 1890 Apr. 25, 1890 Apr. 21, 1890 Apr. 22, 1890 Apr. 22, 1890 Apr. 29, 1890 June 3, 1890 June 10, 1890 June 10, 1890 June 17, 1890 June 24, 1890 June 24, 1890				

171. GENERATION.—119. REGULATORS—ALTERNATING.

171. GENERATION.—119. REGULATORS—ALTERNATING.									
No.	NAME.	Date.	No.	NAME.	DATE.				
412,185 412,186 418,659	Hopkinson, J. and E Hopkinson, J. and E Stanley, W., jr	Oct. 1, 1889	423,553 427,571 428,620	Gutmann, L Heymann, E. and F. W Lemp, H. and Moody, N. S	May 13, 1890				
	171. GENERATION.—97. Systems of Distribution.								
407,204 407,294 407,485 408,513 409,182 409,565 409,566 413,293 413,353 413,810 414,541 417,668 418,912	Higham, D	Aug. 6, 1889 Aug. 20, 1889 Aug. 20, 1889 Oct. 22, 1889 Oct. 22, 1889 Oct. 29, \$889 Nov. 5, 1889 Dec. 17, 1889	419,660 419,662 419,663 421,208 424,606 425,470 426,127 427,515 428,647 428,651 430,060 430,688 11,031	Gutmann, L	May 27, 1890				
		OTIVE POWE	R _0 Ca	P RD (EP)					
414,418 414,996 415,338	Leonard, H. W	Nov. 5, 1889 Nov. 12, 1889	418,402 420,693	Darling, W. H. McElroy, D. S					
	172. MOTI	VE POWER.—	15. Denta	AL INSTRUMENTS.					
407,950 409,437	Cooke, A. R	July 30, 1889 Aug. 20, 1889	427,070	Gibbs, W. E	May 6, 1890				
	172. A	OTIVE POWI	ER.—75. I	LOCOMOTION.					
406,391 406,420 406,421 406,600 406,743 406,797 406,798 406,803 406,804 406,805 406,806 406,333 406,917 407,093 407,093 407,188 407,470 407,470 407,470 407,470 407,749 407,749 407,749 407,749 407,749 408,231 408,503 408,503 408,503 408,503	Dibble, H. D Blackwell, F. O Blackwell, F. O Sprague, F. J Knight, W. H Van Depoele, C. J Weems, D. G Weems, D. G Weems, D. G Griscom, W. W Knight, W. H Main, W Main, W Main, W Main, W Field, S. D Cutler, H. H Short, S. H Riker, A. L Short, S. H Van Depoele, C. J Griscom, W. W Griscom, W. W Adams, T. E Morley, J. H Sprague, F. J Currie, S. C. C Van Depoele, C. J	July 9, 1889 July 16, 1889 July 23, 1889 July 26, 1889 Aug. 6, 1889	408,754 408,855 408,984 409,104 409,116 409,156 409,237 409,603 409,752 409,757 409,775 409,775 410,049 410,150 410,264 410,498 411,313 411,314 411,613 411,613 411,613 412,528 412,157 412,666 413,151	Salisbury, W. S. Schlesinger, W. M. Love, J. C. Jennings, B. Patton, W. H. Van Depoele, C. J. Ries, E. E. Dickson, J. G. and R. and Snyder, P. McElroy, W. J. Ries, E. E. De Ferranti, S. Z. Allen, R. N. Van Gestel, J. T. Chase, H. A. Blackwell, F. O. Daft, L. Wightman, M. J. Wightman, M. J. Fraley, G. B. Riker, A. L. Jackson, C. A. Anderson, A. Anderson, A. Cushing, J. P. McDougall, W. M. Daft, L. Reno, J. W. Sprague, F. J.	Aug. 13, 1889 Aug. 20, 1889 Aug. 20, 1889 Aug. 27, 1889 Sept. 3, 1889 Sept. 3, 1889 Sept. 3, 1889 Sept. 17, 1889 Sept. 17, 1889 Sept. 17, 1889 Sept. 17, 1889 Oct. 1, 1889 Oct. 1, 1889 Oct. 1, 1889 Oct. 8, 1889				

172. MOTIVE POWER.—75. LOCOMOTION—Continued.

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No.	NAME.	DATE.	No.	Name.	DATE.
413,637	Wheless, M		424,110	Harris, S	
413,731	Poole, C. P	Oct. 29, 1889	424,206	Hunter, R. M	
413,818	Adams, T. E	Oct. 29, 1889	424,207	Hunter, R. M.	
414,049	Hunter, R. M.	Oct. 29, 1889	424,298	Henry, J. C	
414,050	Hunter, R. M.	Oct. 29, 1889	424,340	McLaughlin, J. F	Mar. 25, 1890
414,172	Sprague, F. J. and O'Shaugh-	Oct. 29, 1889	424,364	Slentz, E. P. and McGrew, J. B.	
414 990	nessy, P. F. Christy, W	Nov. 5 1990	424,374 424,380	Stephenson, J Van Depoele, C. J	
414,289	Reams, J. M		424,381	Van Depoele, C. J	
414,583 414,609	Van Depoele, C. J.	Nov. 5, 1889	424,436	Sprague, F. J	
415,070	Short, S. H	Nov. 12, 1889	424,607	Hunter, R. M	Apr. 1, 1890
415,165	Finney, J. R.		424,695	Van Depoele, C. J	Apr. 1, 1890
415,710	Fowler, F. E		424,699	Bentley, E. M.	
416,289	Ellinwood, A. E		424,810	McLaughlin, J. F	
416,366	Johnson, T. L		424,817	Patton, W. H	
416,920	Jenkins, W. F	Dec. 10, 1889	424,818	Perret, F. A	Apr. 1, 1890
417,095	Saville, J. J. and Winspear, J. H.	Dec. 10, 1889	424,845	Bentley, E. M.	Apr. 1, 1890
417,120	Van Depoele, C. J		424,848	Blackwell, F. O	
417,121	Van Depoele, C. J.	Dec. 10, 1889	424,887	Knight, W. H	
417,122	Van Depoele, C. J.	Dec. 10, 1889	424,888	Knight, W. H	
417,259	Main, W		424,910	Van Depoele, C. J.	
417,338	Ries, E. E		424,911	Van Depoele, C. J.	
417,654	Van Depoele, C. J	Dec. 17, 1889	424,928	Hunter, R. M	
417,747	Short, S. H Blackwell, F. O	Dec. 24, 1889	425,038 $425,076$	Maynadier, J. E.	
417,974 $418,373$	Libbey, H. W		425,077	Hunter, R. M	
418,704	Duggan, J. A		425,101	Kilian, C. J	
418,718	Henning, B. S		425,107	Penney, H. E	
418,843	Johnson, D. E		425,388	Odell, J. B.	
418,856	Storey, I. E		425,488	Blackwell, F. O	
418,893	Hunter, R. M		425,489	Blackwell, F. O	
419,059	Niles, H. B		425,493	Cleveland, W. B.	Apr. 15, 1890
419,094	Wynne, F		425,627	Peckham, E	Apr. 15, 1890
419,166	Williams, J. T		425,640	Thomson, E	Apr. 15, 1890
419,308	Black, B. J		425,694	Porter, W. and George, H	
419,309	Black, B. J. and Jenkins, W. F-		425,720	Wheeler, F. C	
419,314	Cade, B		425,767	Evans, T. A	
419,588	Kitsee, I		425,866	Dewey, M. W	
419,618	Adams, T. E		425,883	Hunter, R. M	
419,673	Hicks, T. H		425,911	Sill, R. V. R	
419,709 419,753	Richter, C Darling, W. H		425,912 $425,950$	Sill, R. V. R	Apr. 15, 1890 Apr. 15, 1890
419,771	Hawkesworth, R. W		425,964	Weems, D. G	
419,841	Dewey, M. W.		425,966	Weems, D. G	Apr. 15, 1890
420,101	Reno, J. W		426,064	Rae, F. B.	
420,804	Johnson, D. E	Feb. 4, 1890	426,066	Rae, F. B.	
421,304	Rae, F. B	Feb. 11, 1890	426,102	Blackwell, F. O	
421,305	Rae, F. B	Feb. 11, 1890	426,269	Gutmann, L	Apr. 22, 1890
421,398	Griffin, P. H	Feb. 18, 1890	426,379	Henry, J. C	Apr. 22, 1890
421,464	Wirt, H. C	Feb. 18, 1890	426,382	Hunter, R. M.	Apr. 22, 1890
421,535	Wheeler, F	Feb. 18, 1890	426,436	Corliss, G. F	Apr. 29, 1890
421,677	Cunningham, J. H	Feb. 18, 1890	426,580	Bentley, E. M	Apr. 29, 1890
421,887	Adair, J	Feb. 25, 1890	426,452	Kuehule, J	Apr. 29, 1890
422,096	Short, S. H	Feb. 25, 1890	426,650	Thompson, R. W	
422,164 422,266	Stearns, C. K. and Wheeler, G. K.		426,657	Brill, J. A	
422,200	Van Depoele, C. J. Farnham, I. H.		426,658 $426,708$	Brill, J. A	
422,445	Priest, E. D		420,708 $427,221$	Brill, J. A.Boynton, E. M.	Apr. 29, 1890 May 6, 1890
422,645	Short, S. H	Mar 4 1800	427,333	Lewis, W. F	May 6, 1890
422,976	Roberts, H. P		427,459	Chamberlain, J. C	May 6, 1890
423,004	Vogler, W		427,569	Harriman, W. F	
423,005	Vogler, W	Mar. 11, 1890	427,589	Marks, H. A	
423,391	Rae, F. B	Mar. 11, 1890	427,725	Bentley, E. M.	
423,400	Voss, D. C	Mar. 11, 1890	427,726	Bentley, E. M	
423,468	Campbell, G. G	Mar. 18, 1890	428,071	Brown, H. P	
423,495	Seymour, H. A.	Mar. 18, 1890	428,072	Brown, H. P	May 20, 1890
423,527	Miller, G. E		428,098	Hunter, R. M.	May 20, 1890
423,552	Gutmann, L		428,136	Rae, F. B	May 20, 1890
423,874	Lineff, A. L	Mar. 18, 1890	428,211	Hunter, R. M	May 20, 1890
424,070	Mansfield, G. W Thompson, W	Mar. 25, 1890	428,499 429,277	Legg, J. B. and Nile, J.	May 20, 1890
424,082	Thompson, W	Mai. 20, 1000	120,211	Lineff, A. L	June 3, 1890
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172. MOTIVE POWER.—36. Motors.

No.	NAME.	DATE.	No.	NAME.	DATE.
		T 1 10 1000	120110	7 11 . 7 0	77.1 25 4200
406,874	Mansfield, G. W		422,148	Parkhurst, E. B	
406,922 407,272	Woolley, L. G	July 16, 1889	$\begin{array}{c c} 422,149 \\ 422,556 \end{array}$	Parkhurst, E. B Walter, H. E	
408,910	Card, G. F	Aug. 13, 1889	422,911	Butterfield, H. R	
411,030	Hirlimann, C. J	Sept. 17, 1889	423,462	Whittingham, G. H	
411,833	Peck, C. C	Oct. 1, 1889	423,891	Barriett, S. L	Mar. 18, 1890
411,982	Diehl, P	Oct. 1, 1889	423,975	Wightman, M. J	
411,983	Diehl, P	Oct. 1, 1889	424,535	Bock, L, jr	Apr. 1, 1890
412,177	Groswith, H		425,106	Nichols, E. I	Apr. 8, 1890
413,512	Hull, R. C	Oct. 22, 1889	425,991	Davis, F. E. and Scott, J., jr	
414,757	Diehl, P.		425,995	Diehl, P.	
414,758	Diehl, P		426,380 $427,235$	Henry, J. C.	Apr. 22, 1890
415,350 417,474	Pullman, H. B		427,503	Ingraham, A. A Duncan, L	May 6 1890
418,678	Blades, H. H		428,169	Knight, W. H.	May 20, 1890
419,245	Currie, S. C. C		428,454	Chapman, W. H	May 20, 1890
419,808	White, Le R. S	Jan. 21, 1890	428,481	Groswith, H	May 20, 1890
421,090	Anthony, W. A		428,782	Potter, S. M. and Morgan, H. E.	May 27, 1890
421,790	Walsh, P. B		431,020	Brown, P	June 24, 1890
421,911	Diehl, P	Feb. 25, 1890	,	'	· ·
*	172. MOTIV	E POWER.—1	20. Мото	RS-ALTERNATING.	
407,844	Thomson, E	July 30, 1889	418,654	Patten, F. J	Dec. 31, 1889
408,641	Van Depoele, C. J.	Aug. 6, 1889	419,664	Gutmann, L	Jan. 21, 1890
408,642	Van Depoele, C. J.	Aug. 6, 1889	420,079	Marvin, H. N.	Jan. 28, 1890
410,987	Patten, F. J		421,193	Rice, E. W., jr	
410,988	Patten, F. J.		422,755	De Ferranti, S. Z	Mar. 4, 1890
411,840	Taylor, R.S. and Slattery, M.M.M.		424,036	Tesla, N	Mar. 25, 1890
413,085	Patten, F. J.	Oct. 15, 1889	424,734	Smith, L. T	Apr. 1, 1890
413,986	Van Depoele, C. J.	Oct. 29, 1889	425,923	Zipernowsky, C., Déri, M. and	Apr. 15, 1890
416,191	Tesla, N		497.079	Bláthy, O. T.	Mor 19 1900
416,192	Tesla, N		427,978	Von Dolivo-Dobrowolsky, M	May 13, 1890
416,193 416,194	Tesla, N		428,650 $429,094$	Thomson, E	May 27, 1890 May 27, 1890
416,195	Tesla, N		429,109	Anderson, F	June 3, 1890
418,248	Tesla, N		430,328	Thomson, E. and Rice, E. W., jr-	June 17, 1890
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	172. MOTIVI	E POWER.—12	6. Motor	s-Reciprocating.	
422,201	Fryer, G. G				Feb. 25, 1890
	172. MOTIV	E POWER.—83	B. Transm	HISSION OF POWER.	
400-440	Prodlog C S	Aug. 20, 1990	499.055	Van Depools C. I	Man 4 1900
409,449 409,450	Bradley, C. S.	Aug. 20, 1889	422,855 $422,856$	Van Depoele, C. J	Mar. 4, 1890 Mar. 4, 1890
412,925	Kinsman, F. E	Aug. 20, 1889 Oct. 15, 1889	422,857	Van Depoele, C. J.	Mar. 4, 1890 Mar. 4, 1890
412,932	Shallenberger, O. B		422,858	Van Depoele, C. J.	Mar. 4, 1890
418,652	Patten, F. J		422,859	Van Depoele, C. J.	Mar. 4, 1890
418,653	Patten, F. J		422,860	Van Depoele, C. J.	Mar. 4, 1890
418,655	Patten, F. J		429,729	Marvin, H. N	June 10, 1890
419,861	Marvin, H. N	Jan. 21, 1890	429,730	Marvin, H. N	June 10, 1890
420,080	Marvin, H. N.	Jan. 28, 1890	429,731	Marvin, H. N	June 10, 1890
420,816	Marvin, H. N		429,732	Marvin, H. N	June 10, 1890
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	173.	CONDUCTORS	S.—13. Co	NDUCTORS.	
406,284	Johns, H. W., jr	July 2, 1889	424,575	Reed, T. S	Apr. 1, 1890
408,901	Snedekor, C. T		424,751	Barrett, J. A	Apr. 1, 1890
409,181	De Ferranti, S. Z	Aug. 20, 1889	425,917	Tortora, E	Apr. 15, 1890
410,953	Brooks, D., jr		429,304	Cobb, H. B	June 3, 1890
419,923	Carpenter, H. H.	Jan. 21, 1890	429,305	Cobb, H. B	June 3, 1890
420,638	Conner, W. A	Feb. 4, 1890	429,306	Cobb, H. B	
421,781	Stoughton, J. A	Feb. 18, 1890	429,815	Reilly, J. C	June 10, 1890
421,968	Phillips, E. F		430,974	Sanche, H	June 24, 1890
423,449	Seely, J. A.	Mar. 18, 1890)		
			/		

173. CONDUCTORS.—94. CONDUCTORS - LEAD-COVERED.

No.	NAME.	DATE.	No.	NAME.	DATE.
2,0,			1		
			11 - (-		
408,374	Cobb, H. B		410,410	Goodwin, C. Q	Sept. 3, 1889
408,375	Cobb, H. B		415,262	Wetmore, J. A	Nov. 19, 1889
408,376	Cobb, H. B		428,055	Patterson, W. R.	May 13, 1890
408,377	Cobb, H. B	Ang. 6, 1889	428,745 $429,255$	Candee, W. L.	May 27, 1890
408,574 $409,375$	Simons, R. L	Ang 20 1889	420,200	Dishop, J. D	June 3, 1890
100,010	indono, iv. II	11ug. 20, 1003			
-	173. CONDU	CTORS.—70. C	ONDUCTOR	s-Underground.	
	1,0, 001,20	020100	1	-	
406,818	Cook, G. W	July 9, 1889	422,244	Muckle, M. R., jr., and Smith,	Feb. 25, 1890
407,447	Phipps, E. H	July 23, 1889	,	T. C.	
411,427	Dashiell, C. C	Sept. 24, 1889	423,023	Bruner, A	Mar. 11, 1890
411,539	Wheeler, G. A	Sept. 24, 1889	423,134	Cope, T. J	Mar. 11, 1890
411,595	Hyland, D. M		424,057	Gilman, C. C.	Mar. 25, 1890
412,095	Johnson, I. La R		424,935	Reid, E. S	Apr. 1, 1890
413,133	Denison, S. P	Oct. 15, 1889	425,913	Smith, A. J	Apr. 15, 1890
413,134	Denison, S. P		425,961	Seubel, P	Apr. 15, 1890
413,215	Warde, G. H.	Oct. 22, 1889	426,196	Munsie, J. F	Apr. 22, 1890
414,327 414,970	Richards, J. W. and Hall, J. B.		426,197 426,198	Munsie, J. F	Apr. 22, 1890 Apr. 22, 1890
415,110	Johnson, I. La R	Nov. 12, 1889 Nov. 12, 1889	426,198	Munsie, J. F	Apr. 22, 1890 Apr. 22, 1890
415,751	Wesslau, B. H. and Trautwein, G		426,201	Munsie, J. F	Apr. 22, 1890
415,752	Wesslau, B. H.	Nov. 26, 1889	426,205	Munsie, J. F	
416,143	Wesslau, B. H	Nov. 26, 1889	426,206	Munsie, J. F	Apr. 22, 1890
416,144	Wesslau, B. H		427,039	Brooks, D., jr	
416,234	Perot, E. S		427,445	Sprague, G	May 6, 1890
416,235	Perot, E. S	Dec. 3, 1889	429,104	Witthaus, E. L	
417,688	Tatham, J	Dec. 17, 1889	429,251	Stafford, J	
417,992	Dell, J	Dec. 24, 1889	429,307	Cobb, H. B	
417,998	Emmet, W. Le R		430,010	Flad, H	
421,088	Tyler, W. P	Feb. 11, 1890	430,297	Patterson, W. R	June 17, 1890
			!		
	173.	CONDUCTORS	S.—14. Co	NNECTORS.	
100 001	D 1 337 33	T 1 0 1000	415.040	DILLER	D 04 1000
406,331	Baker, W. H		417,842	Runkel, J. P	Dec. 24, 1889
409,183 411,093	De Ferranti, S. Z		419,365	Seely, J. A Seely, J. A	Jan. 14, 1890 Jan. 28, 1890
411,153	Coughlin, W. H. Lafferty, S. C	Sept. 17, 1889	420,171 $421,802$	Wollensak, J. F.	Feb. 18, 1890
412,347	Smith, W. F		422,058	McIntire, C	Feb. 25, 1890
412,889	McIntire, C		426,200	Munsie, J. F	Apr. 22, 1890
413,879	Winder, W	Oct. 29, 1889	426,204	Munsie, J. F	Apr. 22, 1890
414,362	Anderson, A	Nov. 5, 1889	427,138	Wamsley, W. F. and McIntosh, T	May 6, 1890
416,284	Adams, T. E	Dec. 3, 1889	428,046	Hanagin, J. A.	May 13, 1890
416,288	Delany, P. B	Dec. 3, 1889	429,745	Van Depoele, C. J	June 10, 1890
	173.	CONDUCTOR	S.—28. In	SULATORS,	
406,041	Gill I C	Iul. 9 1000	110.640	Compag I P	Jan. 21, 1890
406,041	Gill, J. C	July 2, 1889	419,642		
408,383	Chinnock, F. R	Ang 6 1880	420,635 $421,819$	Stieringer, L Davy, J. W	Feb. 18 1890
410,637	Davis, W. M	Sept. 10, 1889	422,651	Stanley, G. E	Mar. 4, 1890
411,749	McCarthy, L	Sept. 94, 1889	425,513	Kookogey, W. P	Apr. 15, 1890
411,801	Fletcher, J. R	Oct. 1, 1889	426,203	Mnnsie, J. F	Apr. 22, 1890
413,146	McCarthy, L	Oct. 15, 1889	427,296	Busby, J. F	May 6, 1890
415,504	Fowler, G	Nov. 19, 1889	428,545	Andrews, E	May 20, 1890
416,122	Park, W. R	Nov. 26, 1889	428,979	Watson, G. B	May 27, 1890
418,369	Huff, G. E	Dec. 31, 1889	430,296	Oakman, S	June 17, 1890
418,766	Smith, J. B	Jan. 7, 1890	430,696	Seamon, W. H	June 24, 1890
			01 -		
	173. Co	ONDUCTORS	-31. Lібн	TNING-RODS.	
406,681	Watts, J. H. C	July 9, 1889	407,660	Hill, C. F	July 23, 1889
-					
	173.	CONDUCTOR	S.—43. Ri	HEOSTATS.	
408,647	Blackwell, F. O	Aug. 6 1889	412,449	Askew, C. B	Oct. 8, 1889
409,135	Bentley, E. M.		420,894	Thompson, W	Feb. 4, 1890
411,947	Wightman, M. J	Oct. 1, 1889	427,032	Bain, F	May 6, 1890
				•	

174. MEDICAL AND SURGICAL.—87. BATHS.

	NAME.	DATE.	No.	NAME.	DATE.
421,294	Lyke, N				Feb. 11, 1890
	174. MEDI	CAL AND SUI	RGICAL	-88. Body-Wear.	
406,306	Pratt, H. P	July 2, 1889	420,611	Stephens, J. E	Feb. 4, 1890
407,115	Pratt, H. P	July 16, 1889	420,740	Sheffield, A. J	Feb. 4, 1890
407,473	Dow, A	July 23, 1889	420,840	Thomas, M. E	Feb. 4, 1890
407,673 408,151	Mellon, J. S Welcker, H	July 25, 1889	420,936 $421,457$	Hall, O. S Wadleigh, M	Feb. 11, 1890
409,673	Everett, C	Aug. 27, 1889	422,107	Aver. C. H	Feb. 25, 1890
409,968	Holmes, W. C	Aug. 27, 1889	423,549	Ayer, C. H Brunning, C. E	Mar. 18, 1890
410,652	Scott, G. A	Sept. 10, 1889	424,786	Hill, E. A	Apr. 1, 1890
411,689 412,196	Smith, C. C. and Martin, H. W. Mellon, J. S.		424,827 427,468	Shelton, W. J.	Apr. 1, 1890
414,668	Laughton, W.	Nov. 5, 1889	428,420	Scott, A. I	May 20, 1890
415,274	Kane, H. H	Nov. 19, 1889	428,540	Williams, R. E	May 20, 1890
416,803 419,013	Phillippi, F. A Grimley, C. H	Dec. 10, 1889	11,053	Reitler, C. W	Jan. 7, 1890
	Orimicy, 6. II	Juli. 1, 1000			
	174. MEDI	CAL AND SUI	RGICAL	-89. Electrodes.	
407,116	Pratt, H. P	July 16, 1889	420,300	Hicks, T. H	Jau. 28, 1890
408,607	Flint, F. W	Aug. 6, 1889	420,710	Bache, R. M	Feb. 4, 1890
409,470	Lawrance, G. McG	Aug. 20, 1889	424,012	MacMaster, M. A	Mar. 25, 1890
412,165 $418,227$	Cox, H. B	Dec. 31 1889	429,068	Sommerville, A. R	May 27, 1890
110,221	1000112011, 12. 11	200. 51, 1000			8
	175. SPECIAL	APPLICATION	S.—4. Ap	PLICATIONS—GENERAL.	
407,477	Ezell, F	July 23, 1889	423,361	Wallace, J. S.	Mar. 11, 1890
408,465	Dewey, M. W	Aug. 6, 1889	423,654	Amet, E. H	Mar. 18, 1890
409,738	Elfering, J. H	Aug. 27, 1889	423,965	Thomson, E	
412,924 $413,058$	Kester, J. F	Oct. 15, 1889 Oct. 15, 1889	424,729 428,042	Scherer, F Conly, M. S	
417,763	Whilton, F. J.	Dec. 24, 1889	429,033	Ide, F. F.	May 27, 1890
420,954	Nutting, S. E		430,387	Kennedy, J. C	June 17, 1890
420,955	Nutting, S. E	Feb. 11, 1890			
	175. SPECIAL APPLI	CATIONS.—5.	Applicat	TIONS—TOOLS AND MACHINES.	
409,097	Casar F M	Aug. 13, 1889	414,695	Gaynor, T. F	Nov. 12, 1889
410,180	Casey, F. M	Sept. 3, 1889	417,132	Baldwin, C. W	Dec. 10, 1889
410,182	Ongley, C. E	Sept. 3, 1889	419,111	Casey, F. M	Jan. 7, 1890
410,183	Ongley, C. E	Sept. 3, 1889	420,771	Clark, J. H	Feb. 4, 1890
410,183 410,184	Ongley, C. E	Sept. 3, 1889 Sept. 3, 1889	422,245	Hart, A. W	Feb. 4, 1890 Mar. 11, 1890
410,183 410,184 410,212	Ongley, C. E	Sept. 3, 1889 Sept. 3, 1889 Sept. 3, 1889	422,245 422,948	Hart, A. W	Feb. 4, 1890 Mar. 11, 1890 Mar. 11, 1890
410,183 410,184 410,212 412,332	Ongley, C. E	Sept. 3, 1889 Sept. 3, 1889 Sept. 3, 1889 Oct. 8, 1889	422,245 422,948 422,968	Hart, A. W	Feb. 4, 1890 Mar. 11, 1890 Mar. 11, 1890 Mar. 11, 1890
410,183 410,184 410,212	Ongley, C. E	Sept. 3, 1889 Sept. 3, 1889 Sept. 3, 1889 Oct. 8, 1889 Oct. 8, 1889	422,245 422,948	Hart, A. W Kilbourn, W. H Paine, W. J	Feb. 4, 1890 Mar. 11, 1890 Mar. 11, 1890 Mar. 11, 1890 May 13, 1890
410,183 410,184 410,212 412,332 412,333	Ongley, C. E Smith, R. C Gibson, W. P Gibson, W. P Goodson, G. A	Sept. 3, 1889 Sept. 3, 1889 Sept. 3, 1889 Oct. 8, 1889 Oct. 8, 1889 Nov. 5, 1889	422,245 422,948 422,968 427,549 429,012	Hart, A. W	Feb. 4, 1890 Mar. 11, 1890 Mar. 11, 1890 Mar. 11, 1890 May 13, 1890
410,183 410,184 410,212 412,332 412,333 414,637	Ongley, C. E. Smith, R. C. Gibson, W. P. Goodson, G. A. 175. SPECIAL	Sept. 3, 1889 Sept. 3, 1889 Oct. 8, 1889 Oct. 8, 1889 Oct. 8, 1889 Nov. 5, 1889	422,245 422,948 422,968 427,549 429,012 ONS.—21.	Hart, A. W	Feb. 4, 1890 Mar. 11, 1890 Mar. 11, 1890 Mar. 11, 1890 May 13, 1890 May 27, 1890
410,183 410,184 410,212 412,332 412,333 414,637 413,411	Ongley, C. E Smith, R. C Gibson, W. P Goodson, G. A 175. SPECIAL McElroy, D. S	Sept. 3, 1889 Sept. 3, 1889 Sept. 3, 1889 Oct. 8, 1889 Oct. 8, 1889 Nov. 5, 1889	422,245 422,948 422,968 427,549 429,012 DNS.—21.	Hart, A. W	Feb. 4, 1890 Mar. 11, 1890 Mar. 11, 1890 Mar. 11, 1890 May 13, 1890 May 27, 1890
410,183 410,184 410,212 412,332 412,333 414,637	Ongley, C. E. Smith, R. C. Gibson, W. P. Goodson, G. A. 175. SPECIAL	Sept. 3, 1889 Sept. 3, 1889 Sept. 3, 1889 Oct. 8, 1889 Oct. 8, 1889 Nov. 5, 1889 L APPLICATIO	422,245 422,948 422,968 427,549 429,012 ONS.—21.	Hart, A. W	Feb. 4, 1890 Mar. 11, 1890 Mar. 11, 1890 Mar. 11, 1890 May 13, 1890 May 27, 1890 Apr. 1, 1890 May 13, 1890
410,183 410,184 410,212 412,332 412,333 414,637 413,411 421,067	Ongley, C. E Smith, R. C Gibson, W. P Gibson, W. P Goodson, G. A 175. SPECIAL McElroy, D. S Currie, S. C. C Eickemeyer, R	Sept. 3, 1889 Sept. 3, 1889 Sept. 3, 1889 Oct. 8, 1889 Oct. 8, 1889 Nov. 5, 1889 L APPLICATIO	422,245 422,948 422,968 427,549 429,012 0NS.—21. 424,703 427,606 430,606	Hart, A. W	Feb. 4, 1890 Mar. 11, 1890 Mar. 11, 1890 Mar. 11, 1890 May 13, 1890 May 27, 1890 Apr. 1, 1890 May 13, 1890
410,183 410,184 410,212 412,332 412,333 414,637 413,411 421,067 422,512	Ongley, C. E Smith, R. C Gibson, W. P Goodson, G. A 175. SPECIAL McElroy, D. S Currie, S. C. C Eickemeyer, R	Sept. 3, 1889 Sept. 3, 1889 Sept. 3, 1889 Oct. 8, 1889 Oct. 8, 1889 Nov. 5, 1889 Cot. 22, 1889 Feb. 11, 1890 Mar. 4, 1890 CCIAL APPLIC	422,245 422,948 422,968 427,549 429,012 0NS.—21. 424,703 427,606 430,606	Hart, A. W Kilbourn, W. H Paine, W. J Burton, J. M Carpenter, C. F ELECTRO-MAGNETS. Clarke, G. D Patten, F. J Alexander, W. W —16. HEATERS.	Feb. 4, 1890 Mar. 11, 1890 Mar. 11, 1890 Mar. 11, 1890 May 13, 1890 May 27, 1890 Apr. 1, 1890 May 13, 1890 June 24, 1890
410,183 410,184 410,212 412,332 412,333 414,637 413,411 421,067 422,512 406,890	Ongley, C. E. Smith, R. C. Gibson, W. P. Gibson, W. P. Goodson, G. A. 175. SPECIAL McElroy, D. S. Currie, S. C. C. Eickemeyer, R. 175. SPE	Sept. 3, 1889 Sept. 3, 1889 Sept. 3, 1889 Oct. 8, 1889 Oct. 8, 1889 Nov. 5, 1889 CAPPLICATIO Cot. 22, 1889 Feb. 11, 1890 Mar. 4, 1890 CCIAL APPLIC July 16, 1889	422,245 422,948 422,968 427,549 429,012 20NS.—21. 424,703 427,606 430,606 ATIONS.—412,599	Hart, A. W	Feb. 4, 1890 Mar. 11, 1890 Mar. 11, 1890 Mar. 11, 1890 May 13, 1890 May 27, 1890 Apr. 1, 1890 May 13, 1890 June 24, 1890 Oct. 8, 1889
410,183 410,184 410,212 412,332 412,333 414,637 413,411 421,067 422,512	Ongley, C. E Smith, R. C Gibson, W. P Goodson, G. A 175. SPECIAL McElroy, D. S Currie, S. C. C Eickemeyer, R	Sept. 3, 1889 Sept. 3, 1889 Sept. 3, 1889 Oct. 8, 1889 Oct. 8, 1889 Oct. 8, 1889 Nov. 5, 1889 CAPPLICATIO Cot. 22, 1889 Feb. 11, 1890 Mar. 4, 1890 CIAL APPLIC July 16, 1889 Aug. 13, 1889 Aug. 13, 1889 Aug. 13, 1889	422,245 422,948 422,968 427,549 429,012 0NS.—21. 424,703 427,606 430,606	Hart, A. W Kilbourn, W. H Paine, W. J Burton, J. M Carpenter, C. F ELECTRO-MAGNETS. Clarke, G. D Patten, F. J Alexander, W. W —16. HEATERS.	Feb. 4, 1890 Mar. 11, 1890 Mar. 11, 1890 Mar. 11, 1890 May 13, 1890 May 27, 1890 Apr. 1, 1890 May 13, 1890 June 24, 1890 Oct. 8, 1889 Oct. 15, 1889 Nov. 12, 1889

175. SPECIAL APPLICATIONS.—16. HEATERS—Continued.

No.	NAME.	DATE.	No.	NAME,	DATE,
2.00					
416,360	Dewey, M. W.	Dec. 3, 1889	424,047	Butterfield, H. R. and Mitchell,	Mar. 25, 1890
416,873	Tilghman, B. C	Dec. 10, 1889		W.	
417,013	Fowler, H. E	Dec. 10, 1889	424,403	Butterfield, H. R.	Mar. 25, 1890
417,920	Hunter, R. M.	Dec. 24, 1889	424,404	Butterfield, H. R. and Mitchell,	Mar. 25, 1890
418,198	Lemp, H. and Thomson, E		104 441	W.	Man 02 1000
418,911	Dewey, M. W.		$424,441 \\ 424,921$	Wood, W. M	Mar. 25, 1890
419,032 419,033	Coffin, C. L		424,922	Capek, J. V	Apr. 1, 1890 Apr. I, 1890
419,282	O'Meara, J		425,164	Coffin, C. L	Apr. 8, 1890
420,641	Dewey, M. W.		425,757	Dewey, M. W.	Apr. 15, 1890
420,648	Williams, J. B.		426,437	Drew, C. W. and Francis, E. R.	Apr. 29, 1890
421,185	Miner, W. M		426,781	Dewey, M. W.	Apr. 29, 1890
421,498	Hubinger, J. C.	Feb. 18, 1890	427,151	Burton, G. D	May 6, 1890
421,499	Hubinger, J. C.		427,574	Howard, B. C	May 13, 1890
422,190	Dewey, M. W.	Feb. 25, 1890	427,971	Coffin, C. L	May 13, 1890
422,730	Coffin, C. L		428,443	Ashbaugh, J. I	
423,223	Dewey, M. W.		428,459	Coffin, C. L.	May 20, 1890
423,421	Farrall, T. D		428,616	Lemp, H	May 27, 1890
423,732 423,733	Coffin, C. L		428,617	Lemp, HLemp, H	
423,734	Coffin, C. L		429,559	Carpenter, C. E	June 3, 1890
423,735	Coffin, C. L		429,560	Carpenter, C. E	June 3, 1890
423,736	Coffin, C. L		429,561	Carpenter, C. E	June 3, 1890
423,956	Ross, R		429,562	Carpenter, C. E	
423,966	Thomson, E		430,838	Dewey, M. W.	
423,967	Thomson, E	Mar. 25, 1890	430,839	Dewey, M. W.	June 24, 1890
,					
	175. SPECIAL APP	LICATIONS.—	115. Ignit	ING DEVICES—AUTOMATIC.	
	E .				
408,785	Zoeller, T. J.	Aug. 13, 1889	417,075	Newman, N	Dec. 10, 1889
414,763	Estabrook, W. W	Nov. 12, 1889	417,198	Newman, N	Dec. 10, 1889
416,635	Lungen, A	Dec. 3, 1889			
	THE OFFICE OF THE	NT TO . MEO. 370	***		
	175. SPECIAL AP	PLICATIONS.—	-116. IGNI	TING DEVICES—MANUAL.	
412,464	Carranza, M. and Tinoco, J. M.	Oct 8 1889	428,433	Walton, R. T	May 20 1890
426,381	Hinds, C. H		420,400	waiton, it. I	11ay 20, 1030
120,001		11/11 22, 1000			
	175. SPECI	AL APPLICAT	HONS.—2	25. Incrustation.	
100 100	01, 20, 0		100 101	5 11 W 6	T 15 1000
409,136	Cabell, S. G.	Aug. 13, 1889	430,461	Bull, W. B	June 17, 1890
425,903	Porter, W. H	Apr. 15, 1890	430,462	Bull, W. B	June 17, 1890
			`		
	ARE ODDOTATE OF	DI ICH MICATO	00 35	P	
	175. SPECIAL AP	PLICATIONS	-93. Mag	NETIC LOCKS AND BOLTS.	
408,484	Huebner, L. and Busse, R	Ang. 6 1880	425,777	Godfrey, W. L	Apr. 15 1890
409,508	Schwenke, P		427,341	Meyers, H. J	May 6, 1890
416,103	Harter, G. A	Nov. 26, 1889	428,247	Fenner, W. W	May 20, 1890
419,766	Glaeser, A	Jan. 21, 1890	428,256	Schneider, J.	
420,834	Seib, G. A	Feb. 4, 1890	430,764	Beers, C. B. and Tuttle, W. B	June 24, 1890
421,567	Grah, W., jr	Feb. 18, 1890		· ·	•
				i i	
	175. SPEC	IAL APPLICA	TIONS.—	90. Separators.	
400.00	Combling C	T 0. 1000	400 500	G 11' G	Nr. 4 1000
406,337	Conkling, G		422,732	Conkling, G	Mar. 4, 1890
410,876	Conkling, G	Sept. 10, 1889	423,907	Conkling, G	Mar 25, 1890
410,877 $411,414$	Anthony, W. A	Sept. 24, 1889	430,058	Ball, C. M. and Norton, S	June 10, 1890
411,899	Moffatt, R. R	Oct 1 1880	430,275 430,280	Edison, T. AEdison, T. A	June 17, 1890 June 17, 1890
418,041	Mitchell, N. C	Dec. 24 1889	430,758	Smith, H. B	June 24, 1890
420,334	Conkling, G		11,012	Conkling, G	July 16, 1889
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175. SPECIAL APPLICATIONS.—84. VALVE-CONTROLLERS.

170. SPECIAL APPLICATIONS.—84. VALVE-CONTROLLERS.					
No	NAME	DATE.	No.	NAME.	DATE.
406,751	Martenot, F	July 9 1889	415,871	Kissell, M. A. and A. S.	Nov 26 1889
409,170	Wheeler, M. C. and Clark, A. M.		421,449	Stout, J. V	
411,150	Kissell, A. S	Sept. 17, 1889	422,956	Malmborg, E. R	Mar. 11, 1890
411,908	Stevens, F	Oct. 1, 1889	424,761	Conroy, J. C	Apr. 1, 1890
412,529	Neu, G. S	Oct. 8, 1889			
	176. ELECTRIC	LIGHTING.—S	60. Сит-О	UTS-ELECTRO-MAGNETIC.	
407,455	Smith, A. T	July 23, 1889	425,726	Batchelor, C	Apr. 15, 1890
411,238	Danals, C. A	Sept. 17, 1889	427,237	Kissell, A. S	May 6, 1890
420,622	Dickerson, E. N, jr	Feb. 4, 1890	427,724	Bentley, E. M	May 13, 1890
421,177	Lemp, H	Feb. 11, 1890	428,935	Bentley, E. M	May 27, 1890
421,207	Thomson, E	Feb. 11, 1890	430,096	Waddell, M	June 10, 1890
422,524	Happoldt, M. C	Mar. 4, 1890	430,326	Thomson, E. and Rice, E. W., jr-	June 17, 1890
423,638	Scribner, C. E	Mar. 18, 1890			
	176. ELECTRI	C LIGHTING.	—79. Cuт	-Outs-Mechanical.	
406,468	Powers, J. A.	July 9 1889	424,739	Van Nuis, C. S.	Apr. 1 1890
406,897	Gaynor, T. F		425,205	Bush, A. R	
406,906	Hill, W. S.		425,507	Hamilton, C. J.	Apr. 15, 1890
408,194	Riggs, H. T		426,049	Norton, J. P	
408,678	Thompson, W	Aug. 6, 1889	427,024	Whitaker, H. B.	
411,935	Seymour, A. P.		427,521	Platt, O. S. and Orford, J. M	
412.159 414,966	Bennett, F. M Battershall, J. W		$\begin{array}{c} 427,522 \\ 427,523 \end{array}$	Platt, O. S. and Orford, J. M Platt, O. S. and Orford, J. M	May 6 1890
417,497	Morgan, R. A., jr	Dec. 17, 1889	428,586	Alton, G. H	May 27 1890
421,179	Little, E. W.	Feb. 11, 1890	428,704	Thomson, E	
422,147	Parker, W. E. and Temple, H. E.		428,934	McLaughlin, J. F	
422,705	Berrenberg, A. and Umbehend,		429,054	Andersen, J. M	June 10, 1890
109 100	J. McEvoy, T. F	Man 90 1000	430,252	Norton, J. A.	June 17, 1890
423,488	McEvoy, 1. F	Mar. 25, 1590			
	176. ELECTI	RIC LIGHTING	3.—78. Ct	UT-OUTS-THERMAL.	
406,268	Currie, S. C. C	July 2 1889	421,396	Frei, G. A	Feb. 18, 1890
406,469	Powers, J. A		423,102	Wood, J. J	Mar. 11, 1890
409,628	Bishop, W. S	Aug. 20, 1889	424,229	Seely, J. A	Mar. 25 7890
410,545	Furlong, L. F	Sept. 3, 1889	425,762	Edison, T. A	Apr. 15, 1890
411,380	Heller, F. G. A		426,024	Von der Kammer, J	Apr. 22, 1890
411,423	Bussman, O. S	Sept. 24, 1889	426,057	Patterson, T	Apr. 22, 1890
411,452 413,703	Klein, P. H., jr		426,082 426,156	Thomson, E Warrell, F. G	Apr. 22, 1890
413,735	Schaefer, L		427,548	Brush, C. F.	
413,813	Root, H. C		427,823	Anthony, W. A	May 13, 1890
414,792	Bottome, T. D	Nov. 12, 1889	428,564	Jenks, W. J	May 20, 1890
.417,758	Von der Kammer, J	Dec. 24, 1889	429,133	Kammeyer, C. E	June 3, 1890
420,444	Farrell, G	Feb. 4, 1890	429,584	Possons, N. S	June 3, 1890
421,180 421,240	Little, E. WCardew, P		430,967	Miller, I. N	June 24, 1890
	· · · · · · · · · · · · · · · · · · ·	,	IGHTe 1	RC, GRAVITY FEED, CLUTCH.	
1	T.O. EBECTATO ETOT	11110100. 1	AGILLS—A	MO, GRAVIII PEED, GEOTCH.	
408,948	Barker, W. H	Aug. 13, 1889	415,572	Scribner, C. E	
410,493	Cohen, R. L	Sept. 3, 1889	418,757	Scribner, C. E	Jan. 7, 1890
414,130	Seifert, F. W. R	Oct. 29, 1889	420,109	Scribner, C. E	Jan. 28, 1890
415,571	Scribner, C. E	Nov. 19, 1889	430,260	Alcock, A. U. and Galopin, H -	June 17, 1890
	176. ELECTRIC LIGHT	ING106. Lig	нтs—Arc	, GRAVITY FEED, GEAR-CLUTCH.	
407,915	Wood, J. J	July 30 1889	420,314	Schefbauer, R	Jan. 28, 1890
408,887	Lighthipe, J. A		424,866	Dulait, J.	Apr. 1, 1890
411,287	Kinsman, F. E		426,405	Wood, J. J	Apr. 22, 1890
412,141	Von Hefner-Alteneck, F. and	Oct. 1, 1889	428,008	Lange, P	May 13, 1890
	Hoffman, C.		429,573	Keller, C. L	June 3, 1890
418,444	Bunnell, J. H.	Dec. 31, 1889	429,787	Coerper, C	June 10, 1890
418,987	Russell, E. C.	Jan. 7, 1890	430,722	Wood, J. J	June 24, 1890

176. ELECTRIC LIGHTING.—107. LIGHTS—ARC, POSITIVE FEED.

No.	Name.	DATE.	No.	Name.	Date.
414,141	Chapman, F. G. and Dearing,	Oct. 29, 1889	424,752	Beach, R. H	Apr. 1, 1890
417,516	F. M. Shawhan, J. F	Dec. 17, 1889	430,357	Thomson, E	June 17, 1890
	176. ELECTRIC LIG	HTING.—108. I	лентя— А	RC, POSITIVE FEED, CLUTCH.	
	1,0, 23201110			1	 -
418,758	Scribner, C. E	Jan. 7, 1890	428,066	Breese, C. P	May 20, 1890
	176. ELECTRIC LIGHT	ING.—109. Lig	нтs—Arc	, Positive Feed, Gear-Clutch.	
409,390 411,713	Carson, R. D	Aug. 20, 1889 Sept. 24, 1889	422,446	Pyle, G. C	Mar. 4, 1890
-	176. ELECTRIC LI	GHTING.—110	Lights-	-Arc and Incandescent.	
411,088	Boardman, F. R.	Sept. 17, 1889	423,873	Pieper, H., fils	Mar. 18, 1890
423,807	Pieper, H., fils	Mar. 18, 1890		•	
	176. ELECTRIC LI	GHTING.—112	. Lights-	-Arc, Special Features	
407,914	Wood, J. J	July 30, 1889	423,637	Scribner, C. E	Mar. 18, 1890
411,936	Seymour, A. P	Oct. 1, 1889	427,195	Seymour, A. P.	May 6, 1890
413,011 413,220	Asmus, G. C	Oct. 15, 1889 Oct. 22, 1889	428,358 428,942	Stevens, N. P	May 20, 1890 May 27, 1890
416,847	McLaughlin, J	Dec. 10, 1889	430,622	Chase, J	June 24, 1890
416,862	Schardt, B. and Lutzenberger, W	Dec. 10, 1889			
	176, ELECTRIC LI	GHTING.—102.	LIGHTS-	-Filaments and Carbons.	
408,286	Bottome, T. D	Aug. 6, 1889	421,733	Liedke, E. L	Feb. 18, 1890
408,358	Schroeder, C. A. J. H	Aug. 6, 1889	422,302	Head, H. H. and Saunderson, L.	Feb. 25, 1890
408,740 410,168	Opperman, A. F	Aug. 13, 1889 Sept. 3, 1889	422,456 422,895	Smith, W. F	Mar. 4, 1890 Mar. 4, 1890
411,016	Edison, T. A.	Sept. 17, 1889	426,479	Tremaine, H. A.	Apr. 29, 1890
411,017	Edison, T. A		428,435	Westinghouse, G., jr	May 20, 1890
411,018 411,020	Edison, T. A		428,604 429,534	Heisler, C De Khotinsky, A	May 27, 1890 June 3, 1890
411,474	Sellon, J. S	Sept. 24, 1889	429,535	De Khotinsky, A	June 3, 1890
418,474 420,881	Saunderson, L		430,933	Edison, T. A	June 24, 1890
420,881	Langhans, R Adeney, W. E. and Saunderson, L		439,991	Davis, J. H	June 24, 1890
	176. ELECTR	IC LIGHTING	.—18. Lig	HTS-lncandescent.	
100 (00	D.V. D.				
406,130 406,498	Edisou, T. A.Backstrom, C. A.		417,789 419,829	Packard, J. W	Dec. 24, 1889 Jan. 21, 1890
411,019	Edison, T. A.	Sept. 17, 1889	425,761	Edison, T. A	Apr. 15, 1890
413,636	Van Gestel, J. T	Oct. 22, 1889	426,055	Packard, J. W.	Apr. 22, 1890
414,741 414,742	Wilson, G. W.		429,172 429,608	Irwin, J. H	June 3, 1890 June 10, 1890
415,335	Reese, J.	Nov. 19, 1889	430,156	Voelker, W. L	June 17, 1890
416,632 417,685	Leber, L. H Sawyer, H. H	Dec. 3, 1889 Dec. 17, 1889	430,932	Edison, T. A.	June 24, 1890
			HTS—INC	andescent, Special Features.	
		110, 110	11.0	Later Francisco	
407,077	Kimball, J. L. and Wirt, H. C.		418,270	Braun, D. J	Dec. 31, 1889
408,600 409,498	Erickson, E. E	Aug. 6, 1889	418,636 419,674	Baillard, G. C.	
410,293	Rockwell, F. C	Sept. 3, 1889	419,733	Hollings, J. C Story, C. B	Jan. 21, 1890
410,689	Hollings, J. C.	Sept. 10, 1889	419,962	Lane, G. M	Jan. 21, 1890
413,442 413,708	Gennert, E. F	Oct. 22, 1889	419,967	Lane, G. M. Rice, E. W., jr	
				, , , , , , , , , , , , , , , , , , , ,	,

176. ELECTRIC LIGHTING.—113. LIGHTS—INCANDESCENT, SPECIAL FEATURES—Continued.

No.	Name.	Date.	No.	NAME.	DATE.			
420,552	Brown, J. E. and J. F	Feb. 4, 1890	426,189	Klein, P. H., jr	Apr. 22, 1890			
420,352	Layng, W. H		427,062	Erickson, E. E	May 6, 1890			
422,196	Flora, E. E. and Hoy, P. R		430,437	Rockwell, F. C	June 17, 1890			
423,207	Bauer, A. H	Mar. 11, 1890	430,645	Heath, J	June 24, 1890			
426,121	Gennert, E. F	Apr. 22, 1890	430,846	Gennert, E. F	June 24, 1890			
	176. ELECTRIC LIGHTING.—98. LIGHTS—Sockets and Keys.							
409,929	Collier, J. W	Aug. 27, 1889	420,705	Stewart, J	Feb 4 1890			
412,361	Bergmann, S	Oct. 8, 1889	420,706	Stewart, J				
412,962	Loomis, O. P	Oct. 15, 1889	421,586	Kookogey, W. P	Feb. 18, 1890			
414,922	Rodman, S., jr	Nov. 12, 1889	421,630	Stewart, J	Feb. 18, 1890			
416,051	Chassagne, P. J	Nov. 26, 1889	422,360	Wollin, W. F. and Werline, E. H				
417,787 417,788	Packard, J. W		422,634 425,588	Rockwell, F. C.——————————————————————————————————	Mar. 4, 1890 Apr. 15, 1890			
418,426	Thone, F		425,741	Bradley, J. J	Apr. 15, 1890			
418,855	Storey, I. E.		427,514	Holmes, A. B. and Gale, G. F				
419,617	Lawton, C. H	Jan. 14, 1890	428,652	Thomson, E. and Alton, G. H	May 27, 1890			
420,370	Wightman, M. J		430,485	Rockwell, F. C	June 17, 1890			
420,077	Lemp, H	Jan. 28, 1890						
	· 176. E	LECTRIC LIG	HTING.—	-19. Systems.				
407,210	Hunter, J. H	July 16, 1889	420,198	Guerrant, G. M	Ian 98 1800			
407,210	Kinsman, F. E		422,910	Brown, H. P.	Mar. 11, 1890			
411,970	Shallenberger, O. B	Oct. 1, 1889	425,125	Douglass, A				
413,160	Barrett, S. H	Oct. 22, 1889	425,801	Johnson, F	Apr. 15, 1890			
416,611	Hochhausen, W	Dec. 3, 1889	428,050	Macloskie, C. H	May 13, 1890			
416,612	Hochhausen, W	Dec. 3, 1889	430,934	Edison, T. A.	June 24, 1890			
	177. E	LECTRIC SIGN	NALING	-1. Alarms.				
408,992	Schmidt, J. M	Aug. 13, 1889	419,312	Bulluck, W	Jan 14 1890			
409,088	Williams, G. M	Aug. 13, 1889	419,924	Catz, J				
409,460	Dunn, F. M., Petticord, A. and	Aug. 20, 1889	422,803	Kildoyle, E. E	Mar. 4, 1890			
144 000	King, J. H.	G . 17 4000	423,385	Miesse, A	Mar. 11, 1890			
411,230	Streeper, D. H		425,570	Griggs, A. C	Apr. 15, 1890			
414,883 416,381	Harrison, E. L Smith, R. D. O		427,873 428,482	Jones, J. WGuss, O. G	May 15, 1890			
417,117	Thompson, A. C. and Newton,	Dec. 10, 1889	428,688	Morehead, J.				
,	H. E.	,	429,286	Rosenfield, W. W.	June 3, 1890			
	177. ELECT	RIC SIGNALI	NG,—2. A	LARMS—BURGLAR.				
				1				
406,709	Dawson, J. W	July 9, 1889	424,387	Watson, N. M	Mar. 25, 1890			
410,683	Carhart, E. M	Sept. 10, 1889	425,143	Moran, J	Apr. 8, 1890			
412,563	Streeper, D. H.	Oct. 8, 1889	426,705	Bleakley, W. M.	Apr. 29, 1890			
414,308	Goucher, A. A.		426,706	Bleoo, J. H.	Apr. 29, 1890			
416,971 $420,070$	Taylor, E. W		428,774 429,817	Hayward, E. and Sims, E. S Shubert, H. C	May 27, 1890 June 10, 1890			
420,697	Powell, N. M		430,373	Broichgans, S.	June 17, 1890			
421,339	Wollensak; J. F.		430,979	Winegarden, J.	June 24, 1890			
423,753	Gee, W	Mar. 18, 1890						
	177. ELEO	CTRIC SIGNAL	LING.—3.	Annunciators.				
406,377	Vanderpool, A. A.	July 2, 1889	415,182	Hess, A. T	Nov. 12, 1889			
406,423	Bower, J. F	July 9, 1889	415,915	Lee, C. E	Nov. 26, 1889			
407,101	Milliken, G. F	July 16, 1889	416,712	Carter, F. S.	Dec. 10, 1889			
411,133 411,772	Scribner, C. EArmstrong, C. G	Sept. 17, 1889 Oct. 1, 1889	418,868 421,439	Finck, J Shipway, T. H. and Dowdell,	Jan. 7, 1890 Feb. 18, 1890			
413,504	Fisher, F. E	Oct. 22, 1889	121,100	J. R.	100, 10, 1000			
414,343	Thackeray, W. T. W. and	Nov. 5, 1889	421,508	Parks, A. F	Feb. 18, 1890			
414.000	Hurn, I.		421,530	Straight, G. H	Feb. 18, 1890			
414,879	Edgecomb, D. W. and Terry, C. A.	Nov. 12, 1889	422,654 422,773	Suren, N. H.——————————————————————————————————				
	J. 11.		1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	Tallimon, O. 9	Admi. 1, 1000			

177. ELECTRIC SIGNALING.—3. ANNUNCIATORS—Continued.

No. NAME. DATE. No. NAME. DATE.		1111 22202111	o blomatino			
423,494 Seriber, C. E. Mar. 18, 1890 427,879 Lane, F. A. May 13, 1890 424,729 Porter, M. D. App. 1, 1890 428,930 Hart, O. W. May 23, 1890 424,729 Porter, M. D. App. 1, 1890 428,931 Garsel, R. P. May 27, 1890 429,134 Miller, J. J. App. 22, 1890 430,735 Garsel, R. P. Juny 21, 1890 429,134 Miller, J. J. Land 1, 1890 430,735 Garsel, R. P. Juny 21, 1890 430,735 Garsel, R. P. Nov. 28, 1890 430,830 McLaughlin, J. F. July 2, 1880 446,243 Tirrell, J. P. Dec. 3, 1889 408,636 McLaughlin, J. F. July 2, 1880 446,243 Tirrell, J. P. Dec. 3, 1889 408,636 Gayner, T. F. Aug. 13, 1890 446,243 Tirrell, J. P. Dec. 3, 1889 408,636 Gayner, T. F. Aug. 13, 1890 446,612 Cock, W. R. Sept. 17, 1890 433,607 Prost, E. Dec. 3, 1889 444,612 Cock, W. R. Sept. 17, 1890 426,800 Randall, C. A. Feb. 1, 1890 A. A. C. 177. ELECTRIC SIGNALING, 26, Expicators. 177. ELECTRIC SIGNALING, 26, Expicators. 178. ELECTRIC SIGNALING, 26, Expicators. 179. ELECTRIC SIGNALING, 27, Expirators. Feb. 1, 1890 420,900 42	No.	NAME.	DATE.	No.	NAME.	DATE.
423,494 Seriber, C. E. Mar. 18, 1890 427,879 Lane, F. A. May 13, 1890 424,729 Porter, M. D. App. 1, 1890 428,930 Hart, O. W. May 23, 1890 424,729 Porter, M. D. App. 1, 1890 428,931 Garsel, R. P. May 27, 1890 429,134 Miller, J. J. App. 22, 1890 430,735 Garsel, R. P. Juny 21, 1890 429,134 Miller, J. J. Land 1, 1890 430,735 Garsel, R. P. Juny 21, 1890 430,735 Garsel, R. P. Nov. 28, 1890 430,830 McLaughlin, J. F. July 2, 1880 446,243 Tirrell, J. P. Dec. 3, 1889 408,636 McLaughlin, J. F. July 2, 1880 446,243 Tirrell, J. P. Dec. 3, 1889 408,636 Gayner, T. F. Aug. 13, 1890 446,243 Tirrell, J. P. Dec. 3, 1889 408,636 Gayner, T. F. Aug. 13, 1890 446,612 Cock, W. R. Sept. 17, 1890 433,607 Prost, E. Dec. 3, 1889 444,612 Cock, W. R. Sept. 17, 1890 426,800 Randall, C. A. Feb. 1, 1890 A. A. C. 177. ELECTRIC SIGNALING, 26, Expicators. 177. ELECTRIC SIGNALING, 26, Expicators. 178. ELECTRIC SIGNALING, 26, Expicators. 179. ELECTRIC SIGNALING, 27, Expirators. Feb. 1, 1890 420,900 42					1	
423,494 Seriber, C. E. Mar. 18, 1890 427,879 Lane, F. A. May 13, 1890 424,729 Porter, M. D. App. 1, 1890 428,930 Hart, O. W. May 23, 1890 424,729 Porter, M. D. App. 1, 1890 428,931 Garsel, R. P. May 27, 1890 429,134 Miller, J. J. App. 22, 1890 430,735 Garsel, R. P. Juny 21, 1890 429,134 Miller, J. J. Land 1, 1890 430,735 Garsel, R. P. Juny 21, 1890 430,735 Garsel, R. P. Nov. 28, 1890 430,830 McLaughlin, J. F. July 2, 1880 446,243 Tirrell, J. P. Dec. 3, 1889 408,636 McLaughlin, J. F. July 2, 1880 446,243 Tirrell, J. P. Dec. 3, 1889 408,636 Gayner, T. F. Aug. 13, 1890 446,243 Tirrell, J. P. Dec. 3, 1889 408,636 Gayner, T. F. Aug. 13, 1890 446,612 Cock, W. R. Sept. 17, 1890 433,607 Prost, E. Dec. 3, 1889 444,612 Cock, W. R. Sept. 17, 1890 426,800 Randall, C. A. Feb. 1, 1890 A. A. C. 177. ELECTRIC SIGNALING, 26, Expicators. 177. ELECTRIC SIGNALING, 26, Expicators. 178. ELECTRIC SIGNALING, 26, Expicators. 179. ELECTRIC SIGNALING, 27, Expirators. Feb. 1, 1890 420,900 42	100.004	SI A D.F.	35 11 1000	103.00	D 111 C	1 22 1000
424,725 Porter, M. D. Apr. 1, 1890 428,905 Hart, O. W May 20, 1890 429,705 Hynes, M Apr. 8, 1890 429,500 Bishop, J. D. June 10, 1890 149,131 Miller, J. J Apr. 22, 1890 429,500 Bishop, J. D. June 10, 1890 149,131 Miller, J. J Apr. 22, 1890 410,735 Apr. 24, 1890 429,500 Bishop, J. D. June 10, 1890 149,131 Miller, J. J July 2, 1889 416,243 Tirrell, J. P Dec. 3, 1889 406,231 McLaughlin, J. F July 2, 1889 416,243 Tirrell, J. P Dec. 3, 1889 408,676 Smith, F. J Aug. 6, 1889 419,243 Tirrell, J. P Dec. 3, 1889 410,139 Phalan, J. H Sept. 3, 1889 429,014 Moodbury, L. S. Mar. 11, 1890 411,120 Cox. Walker, E. and Swinton, Nov. 5, 1859 425,077 Stanley, A. F. Mar. 18, 1890 407,400 McIntosh, G July 2, 1889 421,831 Bock, L. Jr. Feb. 11, 1890 407,400 McIntosh, G July 23, 1889 421,831 Bock, L. Jr. Feb. 11, 1890 420,102 Higher, F. E Dec. 10, 1889 422,427 Roberts, E. F. Apr. 22, 1890 420,102 Higher, F. E Dec. 10, 1889 422,427 Roberts, E. F. Apr. 22, 1890 420,102 Higher, H. J Jun. 25, 1890 420,102 Higher, H. J Jun. 25, 1890 420,207 Higher, H. Jun. 25, 1890 420,207 Higher, H. Jun. 25, 1890 420,2		Shafer, B. F	Mar. 11, 1890		Lano F A	Apr. 22, 1890
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425,078					Garsed, R. P	May 27, 1890
177. ELECTRIC SIGNALING. 7. 5 7		Hynes, M	Apr. 8, 1890			
400,293 McLaughlin, J. F		Miller, J. J	Apr. 22, 1890		Garsed, R. P	June 24, 1890
400,293 McLaughlin, J. F					-	
406,294 McLaughlin, J. F		177. I	ELECTRIC SIG	NALING	.—7. Bells.	
406,294 McLaughlin, J. F	406 293	McLauchlin J F	July 2 1889	415 990	Zigang J. P	Nov 26 1889
408,696 Samorr, T. F. Aug. 6, 1859 417,926 Lane, F. A. Dec. 24, 1859 410,139 Phalan, J. H. Sept. 3, 1859 425,040 H1,120 Cote, W. R. Sept. 3, 1859 425,040 H1,120 Cote, W. R. Sept. 3, 1859 425,040 Knoth A. A. C. Cot. Walker, E. and Swinton, Nov. 5, 1859 425,047 Sambey, A. F. Mar. 11, 1859 A. A. C. Lance, E. A. July 9, 1859 425,040 Mar. 18, 1850 A. A. C. Lance, E. A. July 9, 1859 425,040 Mar. 18, 1850 A. A. C. Lance, E. A. July 9, 1859 425,040 Mar. 18, 1850 A. A. C. Lance, E. A. July 9, 1859 425,040 Mar. 18, 1850 Mar. 19, 1850						
408,998 Gaynor, T. F. Aug. 13, 1859 415,160 Aug. 12, 1859 411,120 Cole, W. R. Sept. 31, 1859 423,014 Modelary, L. S. Mar. 11, 1850 414,012 Cose, W. R. Sept. 31, 1859 423,014 Modelary, L. S. Mar. 11, 1850 444,012 Cox-Walker, E. and Swinton, Nov. 5, 1859 425,057 Sandey, A. F. Mar. 18, 1859 420,829 Fiske, B. A. July 9, 1859 420,839 Sike, B. A. July 9, 1859 420,839 Sandey, A. F. Mar. 18, 1850 406,839 Fiske, B. A. July 23, 1859 420,839 Sandey, A. F. Sandey, A.		Smith, T. J	Aug. 6, 1889		Lane, F. A	Dec. 24, 1889
11/1,20 Cole, W. R. Sept. 17, 1889 423,697 Pinolet, L. M. Mar. 18, 1890 A. A. C.		Gaynor, T. F	Aug. 13, 1889			
144,612 CoxWalker, E. and Swinton, Nov. 5, 1889 423,707 Stanley, A. F. Mar. 18, 1890						
A. A. C.						
177. ELECTRIC SIGNALING.—26. INDICATORS 406,829	414,012		101. 9, 1009	420,101		
406,830 Fiske, B. A.			ECTRIC SIGNA	LING.		
406,830 Fiske, B. A.	-					
407,400 McIntosh, G					Randall, C. A	Feb. 4, 1890
416,060 Meennich P					Robiuson, W. H	Feb. 11, 1890
417,052					Hodlook W F	Apr. 22 1890
H18,571 Holt, G. A.		Leibnitz F E	Dec. 10, 1889			
Hals, 71 Holt, G. A. Jan. 7, 1890 420,057 Riebard, F. Jan. 28, 1890 420,057 Riebard, F. Jan. 28, 1890 420,217 Thompson, W. and Gartner, A. Jan. 28, 1890 177. ELECTRIC SIGNALING.—38. RAIEWAY-Signals. Hollerith; H. June 24, 1890 189						
420,017 Haight, H. J				,	E. aud Hill, G. J.	
420,217 Thompson, W. and Gartner, A. Jan. 28, 1890	420,057				Ehrlich, L	May 27, 1890
177. ELECTRIC SIGNALING.—38. RAILWAY-SIGNALS.		Richard, F	Jan. 28, 1890	430,804	Hollerith, H.	June 24, 1890
406,057 O'Neil, J. C.	420,217	Thompson, W. and Gartner, A-	Jan. 28, 1890			
406,057 O'Neil, J. C.		177 FI FOT	PIC SIGNALI	VC - 20	Pattway Storato	
408,146 Grassler, W. F. Aug. 8, 1889 426,322 Tower, G. A. Apr. 22, 1890 411,742 Fisk, A. B. Sept. 24, 1889 426,335 Radd, C. H. Apr. 22, 1890 411,742 Fisk, A. B. Sept. 24, 1889 427,387 Winton, H. D. May. 6, 1890 413,410 McElroy, D. S. Oct. 22, 1889 427,742 Koyle, C. H. and Lattig, J. W. May. 6, 1890 413,410 McElroy, D. S. Oct. 22, 1889 427,762 Hass, J., ir. May. 13, 1890 414,473 Kookogey, W. P. Nov. 5, 1889 427,933 Morgan, F. E. and Lane, F. A. May. 13, 1890 414,473 Kookogey, W. P. Nov. 12, 1889 428,944 428,944 416,406 Frith, F. W. Dec. 3, 1889 428,945 428,945 418,258 Miley, E. C. Dec. 10, 1889 429,483 429,4		177, ELECT.	MIC SIGNALI.	MT,—55.	RAILWAY-SIGNALS.	
408,146 Grassler, W. F. Aug. 8, 1889 426,322 Tower, G. A. Apr. 22, 1890 411,742 Fisk, A. B. Sept. 24, 1889 426,335 Radd, C. H. Apr. 22, 1890 411,742 Fisk, A. B. Sept. 24, 1889 427,387 Winton, H. D. May. 6, 1890 413,410 McElroy, D. S. Oct. 22, 1889 427,742 Koyle, C. H. and Lattig, J. W. May. 6, 1890 413,410 McElroy, D. S. Oct. 22, 1889 427,762 Hass, J., ir. May. 13, 1890 414,473 Kookogey, W. P. Nov. 5, 1889 427,933 Morgan, F. E. and Lane, F. A. May. 13, 1890 414,473 Kookogey, W. P. Nov. 12, 1889 428,944 428,944 416,406 Frith, F. W. Dec. 3, 1889 428,945 428,945 418,258 Miley, E. C. Dec. 10, 1889 429,483 429,4	406 057	O'Neil J C	July 9 1889	421 983	Sonders W. M	Feb. 25, 1890
409,146 Grassler, W. F.					Tower, G. A	Apr. 22, 1890
412,550 Neu, G. S.					Rudd, C. H	Apr. 22, 1890
413,409 McElroy, D. S.						
Hash McElroy, D. S. Oct. 22, 1889 427,762 Hass, J., jr. May 13, 1890						
H3,412 McElroy, D. S		McElroy, D. S	Oct. 22, 1889			
144,475 Kookogey, W. P		McElroy, D. S.	Oct. 22, 1889			
141,773 Kookogey, W. P. Nov. 12, 1889 428,041 Conlv, M. S. May 13, 1890 416,713 Conklin, J. I. Dec. 3, 1889 428,974 Fike, D. M. and Hoffman, J. May 27, 1890 417,188 Honter, J. H. Dec. 10, 1889 428,970 Webb, F. W. and Thompson, A. May 27, 1890 M. M. M. M. M. M. M. M		Kookogev. W. P	Nov. 5, 1889			
146,718 Conklin, J. I.		Kookogev, W. P	Nov. 12, 1889	428,041	Conly, M. S.	May 13, 1890
H17,188 Hunter, J. H		Frith, F. W	Dec. 3, 1889			
Mathematics						
418,258 Wiley, E. C		Hunter, J. H.	Dec. 10, 1889	429,074		May 21, 1890
418,850 Pendleton, J. H., Bryson, A. J. Jau. 7, 1890 429,478 Ramsey, J., jr. and Weir, F. C. June 3, 1890 429,483 Rudd, C. H. June 3, 1890 429,858 Rudd, C. H. June 10, 1890 429,858 Boss, G. W. Feb. 4, 1890 430,263 Bentley, E. M. June 10, 1890 420,859 Boss, G. W. Feb. 4, 1890 430,637 Gill, E. R., jr. June 24, 1890 421,239 Cable, P. D. Feb. 11, 1890 431,011 Smith, W. J. and Fox, J. W. June 24, 1890 421,791 Walter, W. C. Feb. 18, 1890 431,017 Conly, M. S. June 24, 1890 406,809 Wilson, J. C. July 9, 1889 420,852 Wood, F. B. Feb. 4, 1890 407,460 Anderson, F. July 16, 1889 428,075 Church, B. S. May 20, 1890 407,461 Anderson, F. July 23, 1889 425,046 Etheridge, H. Apr. 8, 1890 407,462 Anderson, F. July 23, 1889 425,413 Etheridge, H. Apr. 15, 1890 Apr. 1				499 539		June 3 1890
Als,910 Cox, C. A. and J. F. Jan. 7, 1890 429,899 Firman, L. B June 10, 1890 420,858 Boss, G. W Feb. 4, 1890 430,263 Bentley, E. M June 17, 1890 420,859 Boss, G. W Feb. 4, 1890 430,637 Gill, E. R., jr June 24, 1890 421,239 Cable, P. D Feb. 11, 1890 431,011 Smith, W. J. and Fox, J. W June 24, 1890 421,791 Walter, W. C Feb. 18, 1890 431,017 Conly, M. S June 24, 1890 406,809 Wilson, J. C July 9, 1889 420,851 Wood, F. B Feb. 4, 1890 410,786 Cooper, A. J. and Wigzell, E. E. Aug. 27, 1889 426,554 Wilson, J. C Apr. 29, 1890 420,850 Wood, F. B Feb. 4, 1890 420,850 420,850 420,850 420,850 420,850 420,850 420,850					Ramsey, J., ir, and Weir, F. C.	June 3, 1890
420,858 Boss, G. W Feb. 4, 1890 430,263 Bentley, E. M June 17, 1890 420,859 Boss, G. W Feb. 4, 1890 430,637 Gill, E. R., jr June 24, 1890 421,239 Cable, P. D Feb. 11, 1890 431,011 Smith, W. J. and Fox, J. W June 24, 1890 421,791 Walter, W. C Feb. 18, 1890 431,017 Conly, M. S June 24, 1890 177. ELECTRIC SIGNALING.—39. Recorders. 406,809 Wilson, J. C July 9, 1889 420,851 Wood, F. B Feb. 4, 1890 409,755 Richards, J. E Aug. 27, 1889 426,554 Wilson, J. C Apr. 29, 1890 420,850 Wood, F. B Feb. 4, 1890 428,075 Church, B. S May 20, 1890 420,850 Wood, F. B May 20, 1890 420,851 Wilson, J. C Apr. 29, 1890 420,850 Wood, F. B Feb. 4, 1890		and Tiers, C.			Rudd, C. H	June 3, 1890
420,859 Boss, G. W. Feb. 4, 1890 430,637 Gill, E. R., jr June 24, 1890 421,239 Cable, P. D. Feb. 11, 1890 431,011 Smith, W. J. and Fox, J. W. June 24, 1890 421,791 Walter, W. C. Feb. 18, 1890 431,017 Conly, M. S. June 24, 1890 406,172 Lannert, J. A. July 2, 1889 420,851 Wood, F. B. Feb. 4, 1890 406,809 Wilson, J. C. July 9, 1889 420,852 Wood, F. B. Feb. 4, 1890 409,755 Richards, J. E. Aug. 27, 1889 426,554 Wilson, J. C. Apr. 29, 1890 410,786 Cooper, A. J. and Wigzell, E. E. Sept. 10, 1889 428,075 Church, B. S. May 20, 1890 420,850 Wood, F. B. Feb. 4, 1890 428,075 Church, B. S. May 20, 1890 407,460 Anderson, F. July 23, 1889 420,833 Robertson, J. H. Feb. 4, 1890 407,461 Anderson, F. July 23, 1889 420,833 Robertson, J. H. Feb. 4, 1890 407,461 Anderson, F. July 23, 1889 </td <td></td> <td>Cox, C. A. and J. F</td> <td></td> <td>429,899</td> <td>Firman, L. B</td> <td>June 10, 1890</td>		Cox, C. A. and J. F		429,899	Firman, L. B	June 10, 1890
421,339 (21,791) Cable, P. D. Feb. 11, 1890 (431,011) Smith, W. J. and Fox, J. W. June 24, 1890 June 24, 18						
421,791 Walter, W. C. Feb. 18, 1890 431,017 Conly, M. S. Juue 24, 1890 177. ELECTRIC SIGNALING.—39. Recorders. 406,172 Lannert, J. A. July 2, 1889 420,851 Wood, F. B. Feb. 4, 1890 409,755 Richards, J. E. Aug. 27, 1889 426,552 Wood, F. B. Feb. 4, 1890 410,786 Cooper, A. J. and Wigzell, E. F. Sept. 10, 1889 428,075 Church, B. S. May 20, 1890 420,850 Wood, F. B. Feb. 4, 1890 178. TELEGRAPHY.—46. Automatic. 178. TELEGRAPHY.—46. Automatic. 406,982 Anderson, F. July 23, 1889 420,833 Robertson, J. H. Feb. 4, 1890 407,461 Anderson, F. July 23, 1889 425,066 Etheridge, H. Apr. 8, 1890 407,462 Anderson, F. July 23, 1889 425,413 Etheridge, H. Apr. 15, 1890 407,462 Anderson, F. July 23, 1889 425,413 Etheridge, H. Apr. 15, 1890						
177. ELECTRIC SIGNALING.—39. RECORDERS. 406,172 Lannert, J. A. July 2, 1889 420,851 Wood, F. B. Feb. 4, 1890 406,809 Wilson, J. C. July 9, 1889 420,852 Wood, F. B. Feb. 4, 1890 409,755 Richards, J. E. Aug. 27, 1889 426,554 Wilson, J. C. Apr. 29, 1890 410,786 Cooper, A. J. and Wigzell, E. E. Sept. 10, 1889 428,075 Church, B. S. May 20, 1890 420,850 Wood, F. B. Feb. 4, 1890 178. TELEGRAPHY.—46. AUTOMATIC. 406,982 Anderson, F. July 16, 1889 417,407 Cooper, A. S. Dec. 17, 1889 407,460 Anderson, F. July 23, 1889 420,833 Robertson, J. H. Feb. 4, 1890 407,461 Anderson, F. July 23, 1889 425,066 Etheridge, H. Apr. 8, 1890 407,462 Anderson, F. July 23, 1889 425,066 Etheridge, H. Apr. 8, 1890 407,462 Anderson, F. July 23, 1889 425,413 Etheridge, H. Apr. 15, 1890	421,208					
406,172 Lannert, J. A			100. 10, 1000	101,011	Com, 11. 2.	5 dae 21, 1000
406,809 Wilson, J. C July 9, 1889 420,852 Wood, F. B Feb. 4, 1890 420,755 Richards, J. E Aug. 27, 1889 426,554 Wilson, J. C Apr. 29, 1890 420,850 Wood, F. B Feb. 4, 1890 428,075 Church, B. S May 20, 1890 420,850 Wood, F. B July 16, 1889 428,075 Church, B. S May 20, 1890 407,460 Anderson, F July 23, 1889 420,833 Robertson, J. H Feb. 4, 1890 407,461 Anderson, F July 23, 1889 425,066 Etheridge, H Apr. 8, 1890 407,462 Anderson, F July 23, 1889 425,066 Etheridge, H Apr. 8, 1890 407,462 Anderson, F July 23, 1889 425,143 Etheridge, H Apr. 15, 1890		177. ELE	CTRIC SIGNA	LING.—3	9, Recorders.	
406,809 Wilson, J. C July 9, 1889 420,852 Wood, F. B Feb. 4, 1890 420,755 Richards, J. E Aug. 27, 1889 426,554 Wilson, J. C Apr. 29, 1890 420,850 Wood, F. B Feb. 4, 1890 428,075 Church, B. S May 20, 1890 420,850 Wood, F. B July 16, 1889 428,075 Church, B. S May 20, 1890 407,460 Anderson, F July 23, 1889 420,833 Robertson, J. H Feb. 4, 1890 407,461 Anderson, F July 23, 1889 425,066 Etheridge, H Apr. 8, 1890 407,462 Anderson, F July 23, 1889 425,066 Etheridge, H Apr. 8, 1890 407,462 Anderson, F July 23, 1889 425,143 Etheridge, H Apr. 15, 1890	106 170	Lannout I	Tulm 0 1500	600 0 = 1	Wood E P	Feb. 1 1000
409,755 Richards, J. E ——————————————————————————————————						
410,786 Cooper, A. J. and Wigzell, E. E. Sept. 10, 1889 428,075 Church, B. S. May 20, 1890 420,850 Wood, F. B						
420,850 Wood, F. B					Church, B. S	May 20, 1890
406,982 Anderson, F July 16, 1889 417,407 Cooper, A. S Dec. 17, 1889 407,460 Anderson, F July 23, 1889 420,833 Robertson, J. H Feb. 4, 1890 407,461 Anderson, F July 23, 1889 425,066 Etheridge, H Apr. 8, 1890 407,462 Anderson, F July 23, 1889 425,413 Etheridge, H Apr. 15, 1890						
406,982 Anderson, F July 16, 1889 417,407 Cooper, A. S Dec. 17, 1889 407,460 Anderson, F July 23, 1889 420,833 Robertson, J. H Feb. 4, 1890 407,461 Anderson, F July 23, 1889 425,066 Etheridge, H Apr. 8, 1890 407,462 Anderson, F July 23, 1889 425,413 Etheridge, H Apr. 15, 1890		178	TELEGR 4 PH	Y.—46 A:	LTON ATIC	
407,460 Anderson, F July 23, 1889 420,833 Robertson, J. H Feb. 4, 1890 407,461 Anderson, F July 23, 1889 425,066 Etheridge, H Apr. 8, 1890 407,462 Anderson, F July 23, 1889 425,413 Etheridge, H Apr. 15, 1890		170.	TIPINGICAL II	2. 10. A	CIVITIO	
407,460 Anderson, F July 23, 1889 420,833 Robertson, J. H Feb. 4, 1890 407,461 Anderson, F July 23, 1889 425,066 Etheridge, H Apr. 8, 1890 407,462 Anderson, F July 23, 1889 425,413 Etheridge, H Apr. 15, 1890	406,982	Anderson, F	July 16, 1889	417,407	Cooper, A. S.	Dec. 17, 1889
407,461 Anderson, F		Anderson, F	July 23, 1889	420,833	Robertson, J. H	Feb. 4, 1890
407,402 Anderson, F		Anderson, F	July 23, 1889		Etheridge, H	Apr. 8, 1890
407,001 Robertson, 9, 11 July 20, 1009 420,749 Anderson, F Apr. 29, 1890					Etheridge, H	Apr. 15, 1890
	407,092	Robertson, J. H.	July 25, 1889	420,749	Anderson, F	Apr. 29, 1890
	-					

178. TELEGRAPHY.—10. CIRCUIT-CLOSERS.

	170. 1	ELEGRAPH 1.	-10. CIRC	CII-OBOSERS.	
No.	NAME.	DATE.	No.	Name.	DATE.
412,460 412,845 412,758 416,572 417,742	Burton, G. D Ely, G. E Johnston, W. C., jr Conz, G. W. M Prentiss, H. S	Oct. 15, 1889 Oct. 15, 1889 Dec. 3, 1889	419,487 421,340 424,182 424,219	Wollensak, J. F	Feb. 11, 1890 Mar. 25, 1890
	. 178. TEL	EGRAPHY.—4	5. Circuit	S AND SYSTEMS.	-
422,073	Edison, T. A	Feb 25 1890	426,583	Davis, M. M	Apr 20 1800
424,006	Davies, C. L	Mar. 25, 1890	429,377	English, S. M	
	178	. TELEGRAPI	HY48.	Duplex.	
422.072	Edison, T. A	Feb. 25, 1890	422,074	Edison, T. A	Feb. 25, 1890
	1	78. TELEGRAI	PHY.—50.	. Fire.	
407,416	Porter, M. D	July 23, 1889	418,778	Armstrong, C. G	Jan. 7, 1890
408,042	Palmer, D. A	July 30, 1889	420,173	Speicher, J	Jan. 28, 1890
408,762 411,407	Wilson, J. C.	Aug. 13, 1889 Sept. 17, 1889	420,384 $421,853$	Holcombe, A. G.	
412,045	Scribner, J. F	Oct. 1, 1889	421,854	Bulen, G. F	Feb. 18, 1890
412,971	Milliken, G. F.	Oct. 15, 1889	421,882	Seiler, P	Feb. 18, 1890
413,436 414,868	Decrow, W. E Morgan, F. E	Nov 12 1889	423,487 $424,431$	McCullough, G. C	
415,574	Scribner, C. E		425,576	Martin, M	Apr. 15, 1890
415,629	Foote, G. L		426,621	Mackenzie, J. U.	
416,444 416,483	Cooper. T		426,691 $427,711$	Speicher, J. and Fearey, F. T Spike, C. J. and McLeod, H. V	Apr. 29, 1890 May 13, 1890
416,513	Speicher, J	Dec. 3, 1889	430,175	Crockett, C. H. and Allen, C. C.	June 17, 1890
418,322	Rounseville, G. L. B.	Dec. 31, 1889	430,992	Drake, C. C	June 24, 1890
	178. TELEGRAI	PHY.—103. Fir	E, ALARM	s and Extinguishers.	
100.000	C. iv. C. A	T 1 0 1000	101.000	C- CALLE	1 1000
406,629 410,318	Coulter, G. A Denio, W. L	Sept. 3, 1889	424,860 425,089	Cox, C. A. and J. F Singer, W. F	Apr. 1, 1890 Apr. 8, 1890
414,155	Head, C. B	Oct. 29, 1889	426,304	McMahon, J. P	Apr. 22, 1890
419,710	Robbins, A. C.	Jan. 21, 1890	426,688	Shaffer, C. H	
419,902 423,286	Wider, ESmith, W. C	Mar. 11, 1890	426,832 426,917	Chambers, W. H	Apr. 29, 1890 Apr. 29, 1890
424,743	Weinberg, S. S	Apr. 1, 1890	429,318	Ongley, C. E	June 3, 1890
-	- 1	178. TELEGRA	PHY.—29	. Keys.	1
100 120	Wall- II A	T1 0 1000	405 511	Town E W	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1
406,489 411,770	Waldo, H. A. Tebbs, H. S., Lane, N. C. and	July 9, 1889 Sept. 24, 1889	425,511 $426,941$	Jones, F. W Kleber, O	Apr. 29, 1890
	Coombs, V.	1 '	427,876	Kaylor, J. S	May 13, 1890
413,848	Crull, E. Ś	Oct. 29, 1889	429,982	Watterhouse, E. R	June 10, 1890
	178. TEL	EGRAPHY.—30). Lightn	ING ARRESTERS.	
407,454	See, J. W	July 23, 1889	422,354	Rae, F. B	Feb. 25, 1890
409,689	Lemp, H	Aug. 27, 1889	423,788	Maxwell, G. S	Mar. 18, 1890
413,429	Baker, E. B	Oct. 22, 1889	424,562	Loomis, O. P	Apr. 1, 1890
$\begin{array}{c} 414,356 \\ 414,624 \end{array}$	Wirt, C Young, C. I	Nov. 5, 1889	424,563 $425,061$	Loomis, O. P Bishop, J. D	Apr. 1, 1890 Apr. 8, 1890
417,694	Winsor, P. and Wurts, A	Dec. 17, 1889	426,338	Spear, A. D	Apr. 22, 1890
417,695	Winsor, P	Dec. 17, 1889	427,540	Bell, L	May 13, 1890
418,249 418,824	Thomson, E	Jan. 7, 1890	427,984 428,653	Griffin, C. M Thomson, E	May 15, 1890 May 27, 1890
420,096	Pfluger, C. A	Jan. 28, 1890	429,727	Lodge, O. J	June 10, 1890
420,984	Bayne, G. G.	Feb. 11, 1890			

178. TELEGRAPHY.—35. Morse Registers.

No.	NAME.	DATE.	No.	NAME.	DATE.
426,555	Wilson, J. C				Apr. 29, 1890
	178.	TELEGRAPH	Y:51. M	ULTIPLEX.	1
411,611 411,612 420,884 423,901 423,902 423,903 428,221	Read, R. H.——————————————————————————————————	Feb. 4, 1890	428,222 428,223 428,224 428,225 428,226 429,233 429,735	Patten, F. J Dickerson, E. N., jr Patten, F. J	May 20, 1890 May 20, 1890 May 20, 1890 May 20, 1890 June 3, 1890
	178	B. TELEGRAPH	HY54. I	PRINTING.	
406,390 407,581 407,729 407,730 420,240	Dewey, M. W	July 23, 1889 July 23, 1889	420,358 422,604 429,115 429,576 429,577	Rogers, J. H	Mar. 4, 1890 June 3, 1890 June 3, 1890
	. 178.	TELEGRAPHY	7.—55. Qu	JADRUPLEX.	
414,492 418,284 420,594	Carr, C. P	Dee. 31, 1889	424,209 426,591 426,819	Jones, F. W Jones, F. W Jones, F. W	Apr. 29, 1890
	178. ′.	TELEGRAPHY	.—56. Ra	ilway-Car.	
417,438 419,313 421,394 425,466	MeElroy, D. S. Cade, B. Foley, J. S. Stevens, W. F.	Jan. 14, 1890 Feb. 18, 1890	426,522 427,042 428,562	Burton, G. D Burton, G. D Houck, T. J	May 6, 1890
	1	78. TELEGRAI	PHY.—63.	REED.	
409,157	Van Rysselberghe, F				Aug. 13, 1889
	178. TEL	EGRAPHY.—4	1. Relays	AND SOUNDERS.	-
407,480 409,675 410,276 417,217	Healy, C. L.——————————————————————————————————	Aug. 27, 1889 Sept. 3, 1889	418,443 421,214 425,597 426,247	Bunnell, J. H	Feb. 11, 1890 Apr. 15, 1890
	178.	TELEGRAPH	Y.—42. R	EPEATERS.	
415,417 415,578	McIlhenny, R. J	Nov. 19, 1889 Nov. 19, 1889	423,229	Emery, S. S.	Mar. 11, 1890
	178.	TELEGRAPHY	7.—69. Tr	ANSMITTERS.	
411,198 416,732	Johnson, A. E La Dow, O. D	Sept. 17, 1889 Dec. 10, 1889	420,393	Shafer, B. F	Jan. 28, 1890
	179.	TELEPHONY	-81. ANT	i-Inductive.	
411,137 413,707 413,795 417,304	Campbell, H. F Campbell, H. F Stockwell, J. O. and Barrett, A Wilson, J. C	Oet. 29, 1889 Oet. 29, 1889	417,305 417,402 417,511 422,577	Wilson, J. C	Dec. 17, 1889 Dec. 17, 1889

179. TELEPHONY. - 57. TELEPHONES—CALLS.

				· ·	
No.	NAME.	DATE.	No.	NAME.	DATE.
408,224 408,468 414,085 416,754 420,255 421,371 422,722 423,575	Eddy, W.— Dunlap, J. W., sr Schneider, F. W. A Sack, J Taylor, J. D Cutler, J. L Carpenter, H. L Sack, J	Aug. 6, 1889 Oct. 29, 1889 Dec. 10, 1889 Jan. 28, 1890 Feb. 11, 1890 Mar. 4, 1890	424,635 425,594 425,630 425,631 426,989 430,607 430,608 430,636	Wood, F. B.——————————————————————————————————	Apr. 1, 1890 Apr. 15, 1890 Apr. 15, 1890 Apr. 15, 1890 Apr. 29, 1890 June 24, 1890 June 24, 1890 June 24, 1890
	179. T EI	EPHONY.—58	. Теперно	ONES—DETAILS.	
406,567 412,234 417,660 421,011	Edison, T. A	Oct. 8, 1889 Dec. 17, 1889	421,800 422,174 423,299 430,913	Whitney, R. W. and Cowles, B. K Bartlett, S. H. and Waite, H. E. Wolf, J. J. Bell, E. B	Feb. 18, 1890 Feb. 25, 1890 Mar. 11, 1890 June 24, 1890
	179. TEL	EPHONY.—59.	Тегерно	NES-ELECTRIC.	
410,305 412,579 412,580 412,885	Wheless, MAbdank-Abakanowicz, AAbdank-Abakanowicz, AHeydler, E. F	Oct. 8, 1889 Oct. 8, 1889	416,476 417,009 427,204 430,128	Lyon, E. H	Dec. 10, 1889 May 6, 1890
	179. TEL	EPHONY.—60.	Тегерно	NES-MAGNETIC.	
407,799 409,736 413,308 415,700	Trowbridge, J. and Sheldon, S. D'Unger, R. Selden, C. Bonta, J. W.	Aug. 27, 1889 Oct. 22, 1889	421,006 428,174 429,129 429,801	Libbey, H. W	Feb. 11, 1890 May 20, 1890 June 3, 1890 June 10, 1890
	179. TELEPHON	NY.—77. TELEP	HONES—R	ELAYS AND REPEATERS.	-
422,578	Edison, T. A	Mar. 4, 1890	422,579	Edison, T. A	Mar. 4, 1890
	179. TEL	EPHONY.—100	. Teleph	ones—Supports,	
407,004 410,059 411,588	Fisk, N. S.————Wolf, J. J.——Dickson, C. T.——————————————————————————————————	Aug. 27, 1889	414,132 414,961 418,682	Adams, S. J	Nov. 12, 1889
	179. TELEP	HONY.—85. Ti	ELEPHONE	s-Switch-Boards.	
412,818 413,083 421,114	Wood, J. J McLaughlin, J. F Stewart, W. M.	Oct. 15, 1889	424,995 427,622	Owen, E. A.——————————————————————————————————	
	179. TEI	EPHONY.—71	. Тегерно	ones-Switches.	
421,636 425,058	Titus, E. C Warner, E. P	Feb. 18, 1890 Apr. 8, 1890	425,963	Warner, E. P	Apr. 15, 1890
	179. TE	LEPHONY.—64	. Тесерн	ONES—SYSTEMS.	
408,709 409,574 413,276 414,310 415,573 415,765 416,275 416,808	Gray, W Gould, C. C Farnham, I. H Haskins, C. D. and Scribner, C. E Scribner, C. E Carty, J. J Scribner, C. E Scribner, C. E	Aug. 20, 1889 Oct. 22, 1889 Nov. 5, 1889 Nov. 19, 1889 Nov. 26, 1889 Dec. 3, 1889	416,809 417,018 417,271 419,645 420,091 420,183 422,765 424,310	Scribner, C. E Goodridge, W. M O'Connell, J. J Culbertson, J. N O'Connell, J. J Beach, F. G. and Cook, F. B Gould, C. C Kellogg, M. G	Dec. 10, 1889 Dec. 17, 1889 Jan. 21, 1890 Jan. 28, 1890 Jan. 28, 1890 Mar. 4, 1890

179. TELEPHONY.—64. TELEPHONES—Systems—Continued.

No.	NAME.	Date.	No.	NAME.	DATE.
424,993 425,086 425,161 425,853 425,862 425,863 426,266 427,087 427,120 427,121 427,123 427,194 427,154 427,155	McCluer, C. E Robertson, J. H Cassard, H. L Berne, A. W Carty, J. J Carty, J. J Gray, W Kellogg, M. G Scribner, C. E Scribner, C. E Scribner, C. E Scribner, C. E Carty, J. J	Apr. 8, 1890 Apr. 8, 1890 Apr. 15, 1890 Apr. 15, 1890 Apr. 22, 1890 Apr. 22, 1890 May 6, 1890	427,208 427,621 427,623 427,624 427,742 427,917 427,974 428,189 428,698 430,569 430,747 430,748 430,960	Waters, B. E Seribner, C. E Seribner, C. E Seribner, C. E Carty, J. J Seribner, C. E Crossley, L. J., Emmott, W. and Harrison, J. F. Warner, E. P Seribner, C. E Dowst, S. M. and Hosmer, F. H O'Connell, J. J O'Connell, J. J Kitsee, I	May 27, 1890 June 17, 1890 June 24, 1890 June 24, 1890
	179. TELEPHO	NY.—101. TEL	EPHONES-	-Systems, Automatic.	
408,327	Smith, J. R.				·Aug. 6, 1889
	191. ELECTRIC RAI	LWAYS.—1, Co	ONDUCTOR	SUPPORTS AND INSULATORS.	
427,878 428,930 429,058 429,315	Kilian, C. J	May 27, 1890 May 27, 1890	429,316 430,690 430,926	Maequesteu, W. D Robinson, W Davis, W. M	June 24, 1890
	191. ELECTR	IC RAILWAY:	S.—2. Eli	ECTRIC LOCOMOTIVES.	
428,175 428,210 428,669 428,917 429,107 429,314	McLaughlin, J. F	May 20, 1890 May 27, 1890 May 27, 1890 June 3, 1890	429,327 429,687 429,746 430,147 430,686	Spragne, F. J	June 10, 1890 June 10, 1890 June 17, 1890
	191. ELECT	RIC RAILWA	YS.—5. S	YSTEMS—CONDUITS,	
429,025 430,515	Hunter, R. M. Devore, D. B.		11,084	Knight, W. H	June 10, 1890
	191. ELECTRIC	RAILWAYS.	-6. Systi	EMS-CLOSED CONDUIT.	
427,746	Cordley, W. J				May 13, 1890
	191. ELECTRIC RA	MLWAYS.—7.	Systems-	-CIRCUITS, MULTIPLE ARC.	
427,541 429,981 430,076	Bell, L Van Depoele, C. J Hunter, R. M	June 10, 1890	430,208 430,329 11,083	Hunter, R. M	June 17, 1890
	191. ELECTE	RIC RAILWAY	S.—11. Sy	YSTEMS—OVERHEAD.	
429,093	Hunter, R. M.	May 27, 1890	429,199	Macquesten, W. D	June 3, 1890
	191. ELECTRIC B	CAILWAYS.—1	2. System	s—Overhead, Trolleys.	
427,628 429,113 429,413	Short, S. H.——————————————————————————————————	May 13, 1890 June 3, 1890 June 3, 1890	430,580 430,675	Hunter, R. M Nelson, D. C. and Eaton, W. R.	June 17, 1890 June 24, 1890

191. ELECTRIC RAILWAYS.—13. SYSTEMS—TELPHER.

No.	NAME.	DATE.	No.	NAME.	DATE.
429,747	Van Depoele, C. J.				June 10, 1890
		2. APPAREL	.—4. Сит	ring.	
11,019	Nevens, F. W	Aug. 6, 1889	425,572	Hofheimer, M	Apr. 15, 1890
-	4. BATH	S AND CLOSE	TS.—5. C	LOSET CISTERNS.	
407,746	Stevens, J. W				July 23, 1889
	4. BA	THS AND CLO	SETS.—1	2. Urinals.	
416,131	Weeden, H. C	Nov. 26, 1889	416,138	Weeden, H. C	Nov. 26, 1889
		48. GAS.—1	.3. On G.	AS.	
418,550 418,551	Burt, M. CBurt, M. C	Dec. 31, 1889 Dec. 31, 1889	429,675	Burt, M. C	June 10, 1890
	14	BRIDGES.—2	. Ferry	Guards.	
408,778	Wellman, H. P				Aug. 13, 1889
	· 14. BI	RIDGES.—3. G	RDERS AN	D COLUMNS.	
414,686 415,324 415,325	Dunn, P. J	Nov. 19, 1889	425,071 428,145 429,067	Green, L. R Ruttan, H. W Simmons, C. H	May 20, 1890
		14. BRIDGES	.—10. Tov	VERS.	· · · · · · · · · · · · · · · · · · ·
423,632	Rothenberg, W. F				Mar. 18, 1890
	18. CAOUTCHOUC AND) MINOR PLAS	STICS.—7	. Miscellaneous Compositions	,
415,962	Enholm, O. A				Nov. 26, 1889
	18. CAOUTCHOUC AN	ND MINOR PL	ASTICS	-11. Insulating Materials.	0
407,896 407,938 415,864	Marquard, F Marquard, F Gilson, S. H	July 30, 1889	425,615 426,202	Knudson, A. A Munsie, J. F	Apr. 15, 1890 Apr. 22, 1890
	21. CARRI	AGES AND W	AGONS	-67. VELOCIPEDES.	
426,384	Jasper, W				Apr. 22, 1890
	22. METAL FOU	UNDING16. 1	IN METAL	Molds-Soft Metals.	
413,309	Shapleigh, W	Oct. 22, 1889	415,332	Payen, C	Nov. 19, 1889
		*			

23. CHEMICALS.—27. ELECTROLYSIS.

No.	NAME.	DATE.	No.	NAME,	DATE.		
415,644	Kerner, G. and Marx, J	Nov. 19, 1889	422,500	Castner, H. Y	Mar. 4, 1890		
•	23.	CHEMICALS.	—10. Мет	TALLOIDS.	· · · · · · · · · · · · · · · · · · ·		
409,903	De Vars, H. A. B. H				Aug. 27, 1889		
	25. CLA	Y AND POTT	ERY.—2.	Brick Kilns.			
409,489	Mungesser, P. P.	Aug. 20, 1889	409,490	Mungesser, P. P.	Aug. 20, 1889		
	25. CLA	Y AND POTT	ERY.—8.	DRAIN TILES.			
429,844	Culver, J. P	·			June 10, 1890		
	28.	CORDAGE.—5.	CORDS A	ND ROPES.			
416,189	Stone, J. B				Dec. 3, 1889		
	28.	CORDAGE.—	6. Covern	NG CORD.			
411,900 413,629 416,254	McCahey, J	Oct. 22, 1889	420,777 425,990 428,201	Davis, F. E. and Scott, J., jr Davis, F. E. and Scott, J., jr Davis, F. E. and Scott, J., jr	Apr. 22, 1890		
	e	28. CORDAGE.	—14. WA	RPING.			
424,997	Prest, J. E	Apr. 8, 1890	428,772	Goldshmidt, P	May 27, 1890		
		32. DENTISTI	RY.—2. D	RILLS.			
423,344	Retter, A				Mar. 11, 1890		
	38. FELTI	NG AND HAT	MAKIN	G.—11. Fulling.			
428,026	Taylor, F. C. and Hurd, J. R				May 13, 1890		
	38. FELTING	AND HAT MA	AKING.—	-12. Furs and Pelts.			
408,879	Hedbavny, A				Aug. 13, 1889		
	39. FEN	CES38. RAII	LWAY GAT	ELECTRIC.	·		
423,886	Toulmin, M				Mar. 18, 1890		
	39. FENCES.—9. FENCES—WIRE.						
428,123	Morrison, D. B				May 20, 1890		
	40. AD	VERTISING.	2. Autom	ATIC DEVICES.			
420,351	Music, G				Jan. 28, 1890		
					1		

41. FINE ARTS.—8. Engraving Machines.

No.	Name.	DATE.	No.	Name.	DATE.
409,026	Eaton, W. S.——————————————————————————————————	Aug. 13, 1889	428,770	Field, C. H	- May 27, 1890
425,929					
		E ARMS.—1.			
429,594	Bartlett, W. A				June 10, 1890
•	_	42. FIRE ARM	IS.—20. S	IGHTS.	
429,030	Greenfell, H. H				May 27, 1890
	42.	FIRE ARMS.	—25. BAL	L Traps.	
428,030	Wolstencroft, J. and Soley, W. I	I			May 13, 1890
	46. GAMES	S AND TOYS.	-41. Puz	ZLES AND MAGIC.	,
417,931	Miatt, G. W				Dec. 24, 1889
	50. REG	ULATORS.—1.	. Gas—Fi	uid Pressure.	<u> </u>
411,041	King, A. S. and Swaney, W. H				Sept. 17, 1889
	55. HARI	OWARE MAK	ING.—9.	MISCELLANEOUS.	
414,288	Carpenter, H. H	Nov. 5, 1889	429,049	McLaughlin, J. F	May 27, 1890
	57.	HOISTING.	29. Endle	ess Belts.	
410,185	Page, W. N.				Sept. 3, 1889
	58.	HOROLOGY	–15. Тіме	ALARMS.	1
406,769 425,004	Reams, A. J Schnitz, R	July 9, 1889 Apr. 8, 1890	428,854	McCuskey, J. L	May 27, 1890
	58.	HOROLOGY	–16. Тіме	CHECKS.	
417,501 424,268	Norton, H. L. and Cooke, F. W-Carr, R. B		428,583 429,360	Egan, C. E. and Gray, H. F McLaughlin, J. F	May 20, 1890 June 3, 1890
	58. He	OROLOGY.—1	8. Watch	Balances.	
406,364	Mason, C. T	July 2, 1889	422,616	Olney, W. D	Mar. 4, 1890
		OROLOGY.—28	8. Clocks	-Electric.	
407,945 408,846 410,013 411,138 411,168 413,281 413,340 415,817 416,148	Speer, A Pond, C. H Parcelle, A. L Carter, C. H Pond, C. H Hussey, M. L. M Gerry, J. H Lane, F. A Slocum, E. L	July 30, 1889 Aug. 13, 1889 Aug. 27, 1889 Sept. 17, 1889 Sept. 17, 1889 Oct. 22, 1889 Oct. 22, 1889 Nov. 26, 1889 Nov. 26, 1889	417,753 417,927 417,928 418,125 419,776 424,273 424,929 428,676 429,396	Spellier, L. H. Lane, F. A Lane, F. A Hamblet, J Jones, A. B Colby, E. A. and Strong, J. C- Lindenau, E. W Karr, H. C Ward, C. A	Dec. 24, 1889 Dec. 24, 1889 Dec. 24, 1889 Jan. 21, 1890 Mar. 25, 1890 Apr. 1, 1890 May 27, 1890

65. KITCHEN AND TABLE ARTICLES.—15. DISHES AND PLATES.

Name.	_	1		
TVABLE.	DATE.	No.	NAME.	DATE.
				Apr. 15, 1890
Cumnock, V. I	Aug. 13, 1889 Oct. 29, 1889	424,295	Kaslau, J. P	Mar. 25, 1890
67. LAMPS				,
				June 17, 1890
				-
Hollings, J. C	July 23, 1889	422,811	Lemaire, P. C. J	Mar. 4, 1890
67. LAMPS AND (GAS FITTINGS	S.—5. Dro	OP LIGHTS AND HANGERS.	-
Thompson, A. T Merrill, J. S Sayers, W. B. and Sturge, W. H _ Dawes, A Bradner, W. F	July 30, 1889 Aug. 27, 1889 Oct. 8, 1889 Nov. 12, 1889 Nov. 26, 1889	416,368 416,447 422,591 426,778 428,723 428,929	Dawson, E. C.—Hayden, W. W. and Dickeman, C. S. Dalton, J.—Jeffers, C. L.——————————————————————————————————	Dec. 3, 1889 Mar. 4, 1890 Apr. 29, 1890 May 27, 1890
. 67. LAMPS AN	D GAS FITTI	NGS.—6.	Extinguishers—Gas.	
Siersdorfer, M				Dec. 10, 1889
67. LAMPS				
Carroll, W	•	·		Apr. 29, 1890
67. LAMPS	AND GAS FIT	TINGS.—	-22. Lamp Shades.	
Farmer, J. R Laurence, W. B Rice, E. W., jr	Nov. 19, 1889 Dec. 3, 1889 Dec. 10, 1889	419,524 422,592 427,951 428,989	Holman, F	Mar. 4, 1890 May 13, 1890
67. LAMPS AND	GAS FITTING	S.—26. Le	OCOMOTIVE HEAD LIGHTS.	
McDonald, R. T. and Cain, J -		*		Nov. 19, 1889
67. LAMPS	AND GAS FI	TTINGS.	-28. Reflectors.	
Hawkes, T. G				Oct. 1, 1889
67. LAMPS	AND GAS FIT	TINGS.—	-29. Street Lamps.	
Adams, F. U	Nov. 12, 1889	426,155 427,986	Warner, E. P. Gwynn, J. W.	Apr. 22, 1890 May 13, 1890
	Cumnock, V. I.——————————————————————————————————	Cumnock, V. I	Cumnock, V. I	Commock, V. I.

67. LAMPS AND GAS FITTINGS.—51. GAS BURNERS—INCANDESCENT.

No.	Name.	DATE.	No.	NAME.	DATE.
423,317	Heald, A				Mar. 11, 1890
		68. LAUNDRY.—			
430,486	Rose, H. J. F				June 17, 1890
and the grant		72. MASONRY.—7.			
411,805	Gaynor, T. F				Oct. 1, 1889
	73. MEASU	RING INSTRUME	ENTS.—58	3. Voting Machines.	
429,330	Wilkins, T. M. and Reid, A				June 3, 1890
	74.	MACHINE ELEM			
416,090	Best, A. W. and Underwood	, H. G			Nov. 26, 1889
	-	75. METALLUR			
408,130 408,182	Ostermann, H. and Lacroix, Knowles, E. R		413,438	Eggers, F. F	Oct. 22, 1889
		75. METALLUF	RGY.—15.	Lead.	_
415,330 415,347 415,348	Payen, CPayen, CPayen, C	Nov. 19, 1889	415,349 415,683	Payen, C	Nov. 19, 1889 Nov. 19, 1889
	75. MEI	CALLURGY.—17. 1	REDUCING	and Separating.	
418,134 428,378 428,379	Julian, H. F Colby, E. A Colby, E. A	May 20, 1890	428,552 430,453	Colby, E. A	May 20, 1890 June 17, 1890
	75. METALLUR	GY.—67. CHLORINA	TION—So	LUTION AND PRECIPITATION.	
407,386	Wiswell, J. C.	July 23, 1889	410,228	Wiswell, J. C	Sept. 3, 1889
	75. METALLUR	GY.—68. SOLUTION	AND PRE	ccipitation—Electrolysis.	
410,976 415,576	Kerner, G. and Marx, J Siemens, W	Sept. 10, 1889 Nov. 19, 1889	415,738 429,386	Seegall, H. R.——————————————————————————————————	Nov. 26, 1889 June 3, 1890
	83. MI	LLS.—16. GRINDIN	G MILLS-	-Grist Alarms.	
410,502	Donner, W. H	Sept. 3, 1889	410,270	Donner, W. H	Sept. 3, 1889
		84. MUSIC.—20.	Organ-B	ELLOWS.	
407,802	Votey, E. S		<i>-</i>		July 30, 1889

84. MUSIC.—37. Self-Playing Instruments.

No.	NAME.	DATE.	No.	NAME.	DATE.		
407,801	Votey, E. S	July 30, 1889	412,657	Pain, R. W	Oct. 8, 1889		
	84. MUSIC.—51. Self-Playing Instruments—Pneumatic.						
417,680	0 Pain, R. W						
-	84	MUSIC.—81.	ELECTRIC	Actions.			
429,066	Case, J. D. and Evans, C. W	June 10, 1890	430,065	Case, J. D. and Evans, C. W	June 10, 1890		
	73. MEASU.	RING INSTRU	MENTS	-5. Bathometers.	-		
418,889	*Cooper, A. J. and Wigzell, E. E			•	Jan. 7, 1890		
	73. MEASURING INSTRUMENTS.—17. GAME COUNTERS.						
409,937	Devlin, T. C				Aug. 27, 1889		
	73. MEASURING INSTRUMENTS.—34. Recorders.						
409,891	Wills, J				Aug. 27, 1889		
	73. MEASURING INSTRUMENTS.—35. REGISTERS.						
413,207	Pforzheimer, J				Oct. 22, 1889		
	73. MEASU	RING INSTRU	MENTS	-38. SACK SCALES.			
410,886	Gill, O. A				Sept. 10, 1889		
	73. MEASU	RING INSTRU	MENTS	-39. Scale Beams.			
413,331	Snelgrove, W				Oct. 22, 1889		
73. MEASURING INSTRUMENTS.—43. SPEED MEASURES.							
410,023	Richard, F				Aug. 27, 1889		
73. MEASURING INSTRUMENTS.—46. Spring Scales.							
422,876	Bower, J. F				Mar. 4, 1890		
73. MEASURING INSTRUMENTS.—65. THERMOSTATS.							
406,775 409,316 409,996 411,311 412,013 412,115 413,568	Sautter, C. F Butz, A. M Meyer, M Ware, E. R Beebe. E. W Nix, J. L Shaffer, C. H	Aug. 20, 1889 Aug. 27, 1889 Sept. 17, 1889 Oct. 1, 1889 Oct. 1, 1889	414,267 415,007 421,852 424,363 425,625 430,633	Thompson, H. E Thompson, D. W Bulen, G. F Singer, W. F Parker, E. A Easton, L. F	Nov. 12, 1889 Feb. 18, 1890 Mar. 25, 1890 Apr. 15, 1890		

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73. MEASURING INSTRUMENTS.—82. WATER GAGES—FLOAT.

No.	NAME.	DATE.	No.	NAME.	DATE.		
423,680	Fuller, J. A				Mar. 18, 1890		
	73. MEASURIN	G INSTRUME	NTS.—85	. Telethermometers.			
415,758	Wiesebroek, F. W. and Huber,	E			Nov. 26, 1889		
	76. METAL TOOLS AND	IMPLEMENTS	, MAKIN	NG.—24. Tools and Imple	MENTS.		
430,094	Spencer, A. D.				June 10, 1890		
	8	88. OPTICS.—4.	KALEIDO	SCOPES.			
416,092	Clawson, C. C.				Nov. 26, 1889		
88. OPTICS.—19. Compasses.							
413,250	Farciot, C. O				Oct. 22, 1889		
-	89. OR	DNANCE.—12.	OPERATIN	IG ORDNANCE.			
407,487	Maxim, H. S.				July 23, 1889		
	89. OR	DNANCE.—21.	ELECTRIC	APPLIANCES.			
411,831	Nordenfelt, T				Oct. 1, 1889		
	93. PAF	PER MANUFAC	CTURES.	-17. FEEDING.	I		
415,877	Mont-Ross, J. A				Nov. 26, 1889		
	95. PHC	TOGRAPHY.—	-4. Burni	shing Presses.			
412,462	Carley, C. R						
	95.	PHOTOGRAP	HY.—5. (Cameras.			
421,484	Davis, G. E	Feb. 18, 1890	429,705	Steffens, M. J.	June 10, 1890		
	95. PHOI	OGRAPHY.—3	0. Сомви	NED APPARATUS.			
406,299	Overpeck, L. C.				July 2, 1889		
	96. COATING	G WITH MET.	AL.—1. E	LECTRO-DEPOSITION.			
414,860 415,024 423,101 426,788	Dunlap, W. A Coffin, C. C Winslow, W. H Farmer, M. G	Nov. 12, 1889 Mar. 11, 1890	426,789 427,513 428,087	Farmer, M. G Hollingshead, W. B Garrett, D	May 6, 1890		
98. PNEUMATICS.—27. Automatic Fans.							
421,014	Polk, W. R.				Feb. 11, 1890		

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98. PNEUMATICS.—32. AIR AND GAS PUMPS.

No.	NAME.	Date.	No.	NAME.	DATE.
422,219	Jaeger, H. J				Feb. 25, 1890
	98. PNF	EUMATICS.—33	. Air-Pus	ips, Mercury.	
406,231	Nicolaus, E. B				July 2, 1889
	101. PR	INTING.—6. C	ARD AND	Tag—Tickets.	
410,555	Milliken, J. A. and C. H. and D	'Amour, E			Sept. 3, 1889
	101	. PRINTING.	-20. Hane	STAMPS.	
419,068	Randall, C. A				Jan. 7, 1890
	101	. PRINTING.—			
406,291 406,292 409,613	McLaughlin, J. F	July 2, 1889	422,614 427,680 429,359	Nolan, E. J Goodson, G. A McLaughlin, J. F	May 13 1890
	101.	PRINTING.—4	4. Matri	x Making.	
414,399 414,400 416,742 416,743	Goodson, G. A	Nov. 5, 1889 Dec. 10, 1889	418,295 427,681 429,742	Redfield, C. L Goodson, G. A Redfield, C. L	_ May 13, 1890
	101. PRI	NTING.—32. SE	TTING AN	d Distributing.	
412,606	Dow, L	Oet. 8, 1889	418,664	Dreyer, W	Dec. 31, 1889
	102. PR	OJECTILES.—	l. Blastin	NG AND FUSES.	
424,442	Wood, W. M	Mar. 25, 1890	426,971	Firmann, H	Apr. 29, 1890
		104. RAILWA	YS.—10. 1	Rails.	
425,965	Weems, D. G	· 			Apr. 15, 1890
	104	. RAILWAYS	-39. Inte	RLOCKING.	
413,261	Mozier, A. M	Oct. 22, 1889	415,168	Hambery, J. T	Nov. 12, 1889
	104. RAI	LWAYS.—47. T	RACTION-	-Underground.	
409,926	Clement, L. M. and Waters, G. C	Aug. 27, 1889	414,681	Culver, F. E	Nov. 12, 1889
	104. RAILWAY	S.—72. AUTOMA	TIC SIGNA	L-SETTING APPARATUS.	
428,576	Stitzel, F. and Weinedel, C				May 20, 1890

104. RAILWAYS.—94. Automatic Signals.

No.	Name.	DATE.	No.	Name.	DATE.		
417,525	Stitzel, F	Dec. 17, 1889	417,526	Stitzel, F. and Weinedel, C	Dec. 17, 1889		
105. RAILWAY CARS.—4. AXLES.							
420,545	Peckham, E						
		. RAILWAY (
413,960	Pfingst, L				Oct. 29, 1889		
	105. RA	ILWAY CARS	5.—19. Pas	SSENGER CARS.			
415,617	Cody, J. L				Nov. 19, 1889		
	105. RAIL			T CARS—STEAM.			
408,233 419,355 420,543	Griscom, W. W.—————————————————————————————————	Jan. 14, 1890	424,371 424,372 424,373	Stephenson, JStephenson, J	Mar. 25, 1890 Mar. 25, 1890 Mar. 25, 1890		
	105. RAILWAY CARS.—31. STREET CARS.						
420,544	Peckham, E				Feb. 4, 1890		
105. RAILWAY CARS.—32. Trucks.							
410,871 413,890	Bemis, S. A. and Pfingst, L.—Bemis, S. A.——————————————————————————————————	Sept. 10, 1889 Oct. 29, 1889	424,062 427,966	Hazard, R. R.———————Brill, G. M. and J. A			
113. SHEET METAL WARE MAKING.—6. Soldering Clamps.							
415,305	415,305 Thomson, E. and Tregoning, J						
	· · · 114. S1	HIPS.—40. SUB	MARINE A	nd Torpedo.			
423,405	Barton, S.						
	. 13	6. SIGNALS.—	-13. Fog 8	Signals.			
424,544	Donnelly, A. G		~		Apr. 1, 1890		
116. SIGNALS.—16. NAUTICAL SIGNALS.							
427,480	Paine, A. T				May 6, 1890		
116. SIGNALS.—35. Door Bells.							
418,975	Jan. 7, 1890						
121. STEAM ENGINES.—23. Speed Governors.							
407,006	Griscom, W. W				July 16, 1889		

122. STEAM BOILERS.—3. Coverings

No.	NAME.	DATE.	No.	NAME.	DATE.			
427,928	Stellman, J. L				May 13, 1890			
122. STEAM BOILERS.—11. INDICATORS.								
409,189	Gilfillan, A. W	Aug. 20, 1889	420,649	Williams, J. M	Feb. 4, 1890			
	123. AT	R AND GAS ENG	INES.—3.	Explosive.				
408,356 430,310 430,312 430,504	Regan, D. S Eisenhuth, J. W Eisenhuth, J. W Barrett, M. M. and Daly, J.	June 17, 1890 June 17, 1890	430,505 430,506 11,068	Barrett, M. M. and Daly, J. FBarrett, M. M. and Daly, J. FRegan, D. S				
	125. STONE WORKING.—14. MINING MACHINES.							
411,200	Lichner, F. M	Sept. 17, 1889	421,594	Michales, M. A	Feb. 18, 1890			
	126. S'	TOVES AND FUR	NACES.—	-66. Gas Stoves.				
411,448	Johnson, J. and Packer, E.	H			Sept. 24, 1889			
	128. SURGERY.—13. Inhalers and Respirators.							
422,802					Mar. 4, 1890			
	138. HYDRAULIC MOTORS.—8. ELEVATORS.							
410,181	Ongley, C. E	Sept. 3, 1889		Blanchard, S. W	Apr. 8, 1890			
	140. WI	RE WORKING.—9		nes for Winding.				
415,805	Belding, W. S				Nov. 26, 1889			
	159. FIRE E	CSCAPES AND LA	DDERS	-3. Flexible Ladders.	· · · · · ·			
413,270	Welch, O. T				Oct. 22, 1889			
169. FIRE EXTINGUISHERS.—1. CHEMICAL.								
406,341	Douse, T. R				July 2, 1889			
169. FIRE EXTINGUISHERS.—3. STATIONARY.								
416,779	Gleason, E. P				Dec. 10, 1889			
181. ACOUSTICS.—3. MECHANICAL TELEPHONES.								
413,7\$2	Ḥall, A. W	Oct. 29, 1889	422,082	Ladd, H. W	Feb. 25, 1890			

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186. STORE SERVICE.—9. VENDING APPARATUS.

No.	Name.	DATE.	No.	Name.	Date.
409,364 414,000 414,764 418,069 418,070 418,071 422,326	Molyneaux, B. S	Oct. 29, 1889 Nov. 12, 1889 Dec. 24, 1889 Dec. 24, 1889 Dec. 24, 1889	425,370 428,750 428,751 428,828 430,463 11,049	Coyle, A. M — Glass, L. and Arnold, W. S — Glass, L. and Arnold, W. S — Cassard, H. L — Busenbenz, J. J — Cowley, J. T — Cowley, J. T — Cowley, J. T — Cowley, J. T — Cowley	May 27, 1890 May 27, 1890 May 27, 1890 June 17, 1890
	125.	STONE WORL	KING1	0. Drills.	
408,269	Storey, I. E	Aug. 6, 1889	420,500	Storey, I. E	Feb. 4, 1890
	. 18	7. ELEVATOR	S.—1. EL:	EVATORS.	
417,086	Pratt, C. R	Dec. 10, 1889	417,087	Pratt, C. R	Dec. 10, 1889
	. 187	. ELEVATORS	.—2. Con	TROLLERS.	
412,334	Gibson, W. P				Oct. 8, 1889
187. ELEVATORS.—6. Indicators.					
429,189	Cushing, J. P				June 3, 1890
188. FLUID PRESSURE RAILWAY BRAKES-2. DERAILMENT.					
414,295	Cox, C. A. and Cox, J. F				Nov. 5, 1889



APPENDIX No. IX.

PART II.

CONSISTING OF A

NUMERICAL AND CHRONOLOGICAL INDEX OF ALL PATENTS

RELATING TO

ELECTRICITY

Issued from July 1, 1889, to June 30, 1890, inclusive, giving names of Inventors, numbers and dates of Patents, and the sub-class to which each belongs.



NUMERICAL INDEX

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406,172 Lannert, J. A Recorders Re	July 2, 1889				
406,231 Nicolaus, E. B.	July 2, 188				
406,295 Currie, S. C. C	July 2, 188				
406,288 Currie, S. C. C					
406,294 Johns, H. W., jr	July 2, 188				
McLaughlin, J. F					
406,292 McLaughlin, J. F	July 2, 188				
McLaughlin, J. F	July 2, 188				
406,299 McLaughlin, J. F					
406,299 Overpeck, L. C	July 2, 188				
406,301 Baker, W. H	July 2, 188				
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406,421 Blackwell, F. O					
406,429 Currie, S. C. C Magneto-electric					
406,429 Currie, S. C. C Magneto-electric	July 9, 188				
406,468	July 9, 188				
406,469 Powers, J. A Cut-outs, thermal Telegraphy, keys 406,492 Wood, J. J Magneto-electric Regulators 406,493 Wood, J. J do 406,494 Wood, J. J do 406,498 Backstrom, C. A Lights, incandescent 406,567 Edison, T. A Telephones, details Magneto-electric 406,600 Silvey, W. L Magneto-electric 406,600 Sprague, F. J Locomotion 406,629 Coulter, G. A Telegraphy, fire, alarms and extinguishers 406,636 Dongans, M Batteries, galvanic 406,668 Walker, G. W Meters 406,681 Watts, J. H. C Lightning rods 406,769 Walker, G. W Magneto-electric 406,769 Grosmith, H Batteries, galvanic 406,769 Reams, A. J Time-alarms 406,769 Reams, A. J Time-alarms 406,776 Riker, A. L Batteries, secondary 406,776 Schmid, A Magneto-electric Magneto-electric 406,776 Schmid, A Magneto-electric 406,776 Magneto-electric 406,776 Schmid, A Magneto-electric 406,776 Magneto-	July 9, 188				
406,489 Waldo, H. A	July 9, 188				
406,492 Wood, J. J Regulators Regula					
406,493 Wood, J. J	July 9, 188 July 9, 188				
406,494 Wood, J. J					
406,498					
406,567 Edison, T. A Telcphones, details 406,599 Silvey, W. L Magneto-electric 406,600 Sprague, F. J Locomotion Coulter, G. A Telegraphy, fire, alarms and extinguishers 406,636 Dongans, M Batteries, galvanic 406,656 Lotz, F do 406,678 Walker, G. W Meters 406,709 Dawson, J. W Alarms, burglar 406,709 Grosmith, H Batteries, galvanic 406,743 Knight, W. H Locomotion 406,751 Martenot, F Valve-controllers 406,769 Reams, A. J Time-alarms 406,771 Riker, A. L Batteries, secondary 406,775 Sautter, C. F Thermostats 406,776 Schmid, A Magneto-electric					
406,599 Silvey, W. L Magneto-electric 406,600 Sprague, F. J Locomotion 406,629 Coulter, G. A Telegraphy, fire, alarms and extinguishers 406,636 Dongans, M Batteries, galvanic 406,678 Walker, G. W Meters 406,709 Dawson, J. W Lightning rods 406,726 Grosmith, H Batteries, galvanic 406,726 Knight, W. H Locomotion 406,751 Martenot, F Valve-controllers 406,769 Reams, A. J Time-alarms 406,771 Riker, A. L Batterics, secondary 406,775 Sautter, C. F Thermostats 406,776 Schmid, A Magneto-electric					
406,629 Coulter, G. A Telegraphy, fire, alarms and extinguishers					
406,636 Dongans, M Batteries, galvanic 406,656 Lotz, F do 406,678 Walker, G. W Meters 406,769 Dawson, J. W Lightning rods 406,726 Grosmith, H Batteries, galvanic 406,743 Knight, W. H Locomotion 406,751 Martenot, F Valve-controllers 406,769 Reams, A. J Time-alarms 406,771 Riker, A. L Batterics, secondary 406,775 Sautter, C. F Thermostats 406,776 Schmid, A Magneto-electric	July 9, 188				
406,656					
406,678 Walker, G. W Meters 406,651 Watts, J. H. C. Lightning rods 406,709 Dawson, J. W Alarms, burglar 406,726 Grosmith, H Batteries, galvanic 406,743 Knight, W. H Locomotion 406,751 Martenot, F Valve-controllers 406,769 Reams, A. J Time-alarms 406,771 Riker, A. L Batterics, secondary 406,775 Sautter, C. F Thermostats 406,776 Schmid, A Magneto-electric	July 9, 188				
406,681 Watts, J. H. C. Lightning rods 406,709 Dawson, J. W. Alarms, burglar 406,726 Grosmith, H. Batteries, galvanic 406,743 Knight, W. H. Locomotion 406,751 Martenot, F. Valve-controllers 406,769 Reams, A. J. Time-alarms 406,771 Riker, A. L. Batterics, secondary 406,775 Sautter, C. F. Thermostats 406,769 Schmid, A. Magneto-electric	July 9, 188				
406,709 Dawson, J. W Atarms, burglar 406,726 Grosmith, H Batteries, galvanic 406,743 Knight, W. H Locontrollers 406,751 Martenot, F Valve-controllers 406,769 Reams, A. J Time-alarms 406,771 Riker, A. L Batterics, secondary 406,775 Sautter, C. F Thermostats 406,776 Schmid, A Magneto-electric					
406,726 Grosmith, H Batteries, galvanic- 406,743 Knight, W. H Locomotion 406,751 Martenot, F Valve-controllers 406,769 Reams, A. J Time-alarms 406,771 Riker, A. L Batterics, secondary 406,775 Sautter, C. F Thermostats 406,776 Schmid, A Magneto-electric	July 9, 188 July 9, 188				
406,743 Knight, W. H Locomotion 406,751 Martenot, F Valve-controllers 406,769 Reams, A. J Time-alarms 406,771 Riker, A. L Batterics, secondary 406,775 Sautter, C. F Thermostats 406,776 Schmid, A Magneto-electric					
406,751 Martenot, F Valve-controllers 406,769 Reams, A. J Time-alarms 406,771 Riker, A. L Batterics, secondary 406,775 Sautter, C. F Thermostats 406,776 Schmid, A Magneto-electric					
406,769 Reams, A. J Time-alarms 406,771 Riker, A. L Batterics, secondary 406,775 Sautter, C. F Thermostats 406,776 Schmid, A Magneto-electric	July 9, 188				
406,771 Riker, A. L Batterics, secondary Thermostats Magneto-electric Magneto-electric					
406,775 Sautter, C. F	July 9, 188				
406,776 Schmid, A Magneto-electric	July 9, 188				
	July 9, 188				
406,777 Schmid, Ado 406,797 Van Depoele, C. J Locomotion	July 9, 188				
406,797 Van Depoele, C. J. Locomotion Locomotion	July 9, 188				
406,798 Van Depoele, C. J					
406,803 Weems, D. Gdododo	July 9, 188 July 9, 188				
406,805 Weems, D. G					
406,806 Weems, D. Gdo	July 9, 188				
406,309 Wilson, J. C	July 9, 188				
406,518 Cook, G. W Conductors, underground	July 9, 188				

406,825 Edison, T. A	No.	NAME.	Class.	DATE.
466,829 Fiske, B.A.	406,822	Dey, H. E		
406,820 Fiske, B. A.		Edison, T. A		
466,833 Ciske, B. A.		Edison, T. A		
406,838 Criscom, W. W. Locomotion July 9, 1 406,839 Schmid, A Magneto-electric July 9, 1 406,839 Schmid, A Magneto-electric July 16, 1 406,874 Backley, J Motors July 16, 1 406,837 Gardon, T. F Cut-outs, mechanical July 16, 1 406,837 Gardon, T. F Cut-outs, mechanical July 16, 1 406,930 Hill, W. S Date of July 16, 1 406,930 Hill, W. S Date of July 16, 1 406,931 Kissee, I Batteries, secondary July 16, 1 406,931 Kissee, I Batteries, secondary, applications July 16, 1 406,932 Mansfeld, G. W Motors July 16, 1 406,933 Malee, T Batteries, secondary, applications July 16, 1 406,933 Mory, A. and R Duly 16, 1 406,934 Mory, A. and R Duly 16, 1 407,004 Fisk, N. S Telephones, supports July 16, 1 407,004 Fisk, N. S Telephones, supports July 16, 1 407,006 Griscom, W. W Speed governors July 16, 1 407,006 Main, W Duly 16, 1 407,006				T
406,874 Euckley J	406,833	Griscom, W. W.		July 9, 1889
Heaters		Schmid, A		
406,936		Dewey, M. W		
		Gaynor, T. F		
406,917 Knight, W. H		Hill, W. S		
406,922 Mansfield, G. W. Motors July 16, 1 406,961 Schlesinger, W. M Regulators July 16, 1 406,962 Tesla, N Magneto-electric July 16, 1 406,963 Tesla, N Magneto-electric July 16, 1 406,975 Van Gestel, J. T do July 16, 1 406,975 Van Gestel, J. T do July 16, 1 406,975 Van Gestel, J. T do July 16, 1 406,981 Amory, A. and R do July 16, 1 406,982 Anderson, F Telegraphy, automatic July 16, 1 406,982 Anderson, F Telegraphy, automatic July 16, 1 406,994 Chinnock, F. R July 16, 1 406,997 Delany, P. B Batteries, galvanie July 16, 1 407,004 Fisk, N. S. Telephones, supports July 16, 1 407,004 Fisk, N. S. Telephones, supports July 16, 1 407,014 Kelly, J. F. and Brangs, P. H Regulators July 16, 1 407,014 Kelly, J. F. and Brangs, P. H Regulators July 16, 1 407,030 Main, W do July 16, 1 407,093 Main, W do July 16, 1 407,094 Main, W do July 16, 1 407,095 Main, W do July 16, 1 407,101 Milliken, G. F Amunciators July 16, 1 407,101 Milliken, G. F Amunciators July 16, 1 407,116 Pratt, H. P Medical and surgical, body-wear July 16, 1 407,120 Hunter, J. H Lighting, systems July 16, 1 407,224 Hunter, J. H Lighting, systems July 16, 1 407,225 Loomis, O. P Magneto-electric July 16, 1 407,226 Loomis, O. P Magneto-electric July 16, 1 407,227 Woolley, L. G Morors July 16, 1 407,237 Buell, C. E Magneto-electric July 16, 1 407,240 Hunter, J. H Lighting, systems July 16, 1 407,251 Loomis, O. P Magneto-electric July 16, 1 407,252 Loomis, O. P Magneto-electric July 16, 1 407,253 Hunter, J. H Lighting, systems July 16, 1 407,254 Loomis, O. P Magneto-electric July 16, 1 407,255 Loomis, O. P Magneto-electric July 16, 1 407,263 Hunter, J. H Lighting, systems July 16, 1 407,264 Hunter, J. H Lighting, systems July 16, 1 407,365 Sinith, A. T Cut-outs, electr				
406,961 Schlesinger, W. M. Regulators July 16, 1 406,969 Thompson, C. H. Batteries, secondary July 16, 1 406,975 Van Gestel, J. T. do July 18, 1 406,975 Wallace, T. Batteries, secondary, applications July 16, 1 406,975 Wallace, T. Batteries, secondary, applications July 16, 1 406,981 Amory, A. and R. do July 16, 1 406,982 Anderson, F. Telegraphy, automatic July 16, 1 406,994 Chinnock, F. R. Insulators July 16, 1 406,997 Delany, P. B. Batteries, galvanie July 16, 1 407,004 Fisk, N. S. Telephones, supports July 16, 1 407,004 Fisk, N. S. Telephones, supports July 16, 1 407,004 Griscom, W. W. Speed governors July 16, 1 407,004 Kelly, J. F. and Brangs, P. H. Regulators July 16, 1 407,004 Main, W. Locomotion July 16, 1 407,104 Milken, G. F. Annunciators July 16, 1 407,104 Milken, G. F. Annunciator				
406,968 Tesla, N			No.	
406,975	406,968	Tesla, N	Magneto-electric	July 16, 1889
406,975 Wallace, T.				
406,981 Amory, A. and R.				
406,982 Anderson, F		Amory, A. and B.		July 16, 1889
1969 406,994 Chinnock, F. R.		Anderson, F		
407,004 Fisk, N. S.	406,994	Chinnock, F. R	Insulators	July 16, 1889
407,006 Griscom, W. W. Speed governors July 16, 1				
407,014 Kelly, J. F. and Brangs, P. H. Regulators July 16, 1				
407,077 Kimball, J. L. and Wirt, H. C. Lights, incandescent, special features July 16, 1			Regulators	
407,986 Main, W.		Kimball, J. L. and Wirt, H. C.	Lights, incandescent, special features	July 16, 1889
407,095 Main, W		Main, W.		July 16, 1889
407,095 Main, W				July 16, 1889
407,101				
407,115				July 16, 1889
407,116				
407,188 Field, S. D.	407,116	Pratt, H. P.	Electrodes	July 16, 1889
407,201 Higham, D. Systems of distribution July 16, 1 407,210 Hunter, J. H Lighting, systems July 16, 1 407,225 Loomis, O. P Magneto-electric July 16, 1 407,227 Woolley, L. G Motors July 16, 1 407,293 Higham, D. Regulators July 16, 1 407,294 Higham, D. Regulators July 16, 1 1,012 Conkling, G Separators July 16, 1 407,327 Buell, C. E. Magneto-electric, hand machines July 23, 1 407,327 Buell, C. E. Magneto-electric, hand machines July 23, 1 407,414 McKinney, W Meters July 23, 1 407,414 Porter, M. D Telegraphy, fire July 23, 1 407,447 Phipps, E. H Conductors, underground July 23, 1 407,455 Smith, A. T Cut-outs, electro-magnetic July 23, 1 407,460 Anderson, F Cut-outs, electro-magnetic July 23, 1 407,462 Anderson, F Cut-outs, electro-magnetic July 23, 1 407,470 Cutler, H. H Locomotion July 23, 1 407,477 Dow, A Medical and surgical, body-wear July 23, 1 407,477 Dow, A Medical and surgical, body-wear July 23, 1 407,480 Melnotsh, G Indicators July 23, 1 407,480 Melnotsh, G Indicators July 23, 1 407,480 Melnotsh, G Indicators July 23, 1 407,496 Melnots				July 16, 1889
407,210				
407,225		Hunter, J. H		July 16, 1889
407,293 Higham, D. Regulators July 16, 1	407,225	Loomis, O. P	Magneto-electric	July 16, 1889
407,294 Kennedy, R Systems of distribution July 16, 1				July 16, 1889
11,012 Conkling, G Separators July 16, 1	407,295			
407,327 Buell, C. E. Magneto-electric, hand machines July 23, 1				July 16, 1889
407,414 McKiuney, W Meters July 23, 1				July 23, 1889
407,416 Porter, M. D Telegraphy, fire July 23, 1			Solution and precipitation	July 23, 1889
407,447 Phipps, E. H. Conductors, underground July 23, 1				
407,454 See, J. W		Phipps, E. H.	Conductors, underground	July 23, 1889
407,460 Anderson, F		See, J. W	Telegraphy, lightning arresters	July 23, 1889
407,461 Anderson, F. do July 23, 1 407,462 Anderson, F. do July 23, 1 407,470 Cutler, H. H Locomotion July 23, 1 407,473 Dow, A Medical and surgical, body-wear July 23, 1 407,480 Healy, C. L Telegraphy, relays and sounders July 23, 1 407,485 Lighthipe, J. A Systems of distribution July 23, 1 407,487 Maxim, H. S Operating ordnance July 23, 1 407,490 McIntosh, G Indicators July 23, 1 407,496 Short, S. H Locomotion July 23, 1 407,551 Dewey, M. W Telegraphy, printing July 23, 1 407,593 Hollings, J. C Chandeliers July 23, 1 407,618 Slattery, M. M. M Induction coils July 23, 1 407,619 Slattery, M. M. M Meters July 23, 1		Anderson F	Cut-outs, electro-magnetic	July 23, 1889
407,462 Anderson, F.		Anderson, F	dodo	July 23, 1889
407,473 Dow, A Medical and surgical, body-wear July 23, 1 407,477 Ezell, F Applications, general July 23, 1 407,480 Healy, C. L Telegraphy, relays and sounders July 23, 1 407,485 Lighthipe, J. A Systems of distribution July 23, 1 407,497 Maxim, H. S Operating ordnance July 23, 1 407,490 McIntosh, G Indicators July 23, 1 407,496 Short, S. H Locomotion July 23, 1 407,581 Dewey M. W Telegraphy, printing July 23, 1 407,693 Hollings, J. C Chandeliers July 23, 1 407,618 Slattery, M. M. M Induction coils July 23, 1 407,619 Slattery, M. M. M Meters July 23, 1		Anderson, F.	do	July 23, 1889
407,477 Ezell, F. Applications, general July 23, 1 407,480 Healy, C. L. Telegraphy, relays and sounders July 23, 1 407,485 Lighthipe, J. A. Systems of distribution July 23, 1 407,497 Maxim, H. S. Operating ordnance July 23, 1 407,490 McIntosh, G. Indicators July 23, 1 407,581 Dewey. M. W. Telegraphy, printing July 23, 1 407,593 Hollings, J. C. Chandeliers July 23, 1 407,618 Slattery, M. M. M. Induction coils July 23, 1 407,619 Slattery, M. M. M. Meters July 23, 1		Cutler, H. H	Locomotion	July 23, 1889
407,480 Healy, C. L Telegraphy, relays and sounders July 23, 1 407,485 Lighthipe, J. A Systems of distribution July 23, 1 407,487 Maxim, H. S Operating ordnance July 23, 1 407,490 McIntosh, G Indicators July 23, 1 407,496 Short, S. H Locomotion July 23, 1 407,581 Dewey, M. W Telegraphy, printing July 23, 1 407,593 Hollings, J. C Chandeliers July 23, 1 407,618 Slattery, M. M. M Induction coils July 23, 1 407,619 Slattery, M. M. M Meters July 23, 1		Dow, A	Medical and surgical, body-wear	July 23, 1889
407,485 Lighthipe, J. A. Systems of distribution July 23, 1 407,487 Maxim, H. S. Operating ordnance July 23, 1 407,490 McIntosh, G. Indicators July 23, 1 407,496 Short, S. H. Locomotion July 23, 1 407,581 Dewey. M. W. Telegraphy, printing July 23, 1 407,693 Hollings, J. C. Chandeliers July 23, 1 407,618 Slattery, M. M. M. Induction coils July 23, 1 407,619 Slattery, M. M. M. Meters July 23, 1		Healy, C. I.	Telegraphy relays and sounders	July 23, 1889
407,487 Maxim, H. S Operating ordnance July 23, 1 407,490 McIntosh, G Indicators July 23, 1 407,496 Short, S. H Locomotion July 23, 1 407,581 Dewey. M. W Telegraphy, printing July 23, 1 407,593 Hollings, J. C Chandeliers July 23, 1 407,618 Slattery, M. M. M Induction coils July 23, 1 407,619 Slattery, M. M. M Meters July 23, 1		Lighthipe, J. A	Systems of distribution	July 23, 1889
407,496 Short, S. H Locomotion July 23, 1 407,581 Dewey. M. W Telegraphy, printing July 23, 1 407,593 Hollings, J. C Chandeliers July 23, 1 407,618 Slattery, M. M. M Induction coils July 23, 1 407,619 Slattery, M. M. M Meters July 23, 1	407,487	Maxim, H. S	Operating ordnance	July 23, 1889
407,581 Dewey. M. W Telegraphy, printing July 23, 1 407,593 Hollings, J. C Chandeliers July 23, 1 407,618 Slattery, M. M. M Induction July 23, 1 407,619 Slattery, M. M. M Meters July 23, 1				
407,593 Hollings, J. C Chandeliers July 23, 1 407,618 Slattery, M. M. M Induction coils July 23, 1 407,619 Slattery, M. M. M Meters July 23, 1		Dever M W	Tolegraphy printing	July 25, 1889
407,618 Slattery, M. M. M. —————————————————————————————		Hollings, J. C	Chandeliers	July 23, 1889
407,619 Slattery, M. M. M.——————— Meters————— July 23, 1		Slattery, M. M. M.	Induction coils	July 23, 1889
		Slattery, M. M. M.	Meters	July 23, 1889
	407,660	Mellon J S	Lightning rods	July 23, 1889
407,673 Mellon, J. S		Riker, A. L	Locomotion	July 23, 1889
407,692 Robertson, J. H. July 23, 1	407,692			
407,729 Healy, C. L	407,729	Healy, C. L	Telegraphy, printing	July 23, 1889
407,730 Healy, C. L July 23, 1		Healy, C. L	do	July 23, 1889
407,745 Short, S. H.——————————————————————————————————				
407,749 Van Depoele, C. J	407,749			
407,761 Acheson, E. G	407,761	Acheson, E. G	Magneto-electric	July 30, 1889
407,762 Acheson, E. G	407,762	Acneson, E. G	do	July 30, 1889

407.781 Nookogey, W. P. Dateries, galvanic				
407.782 Nookogey, W. P. Datieries, galvanic	No.	Name.	CLASS.	DATE.
407,790 Trowbridge, J. and Sheldon, S. Telephones, magnetic July 30, 1888 407,804 Yotes, E. S. Self-phaving instruments July 30, 1888 407,804 Yotes, E. S. Organ-bellows July 20, 1888 407,805 Yotes, E. S. Organ-bellows July 20, 1888 407,805 Kinsman, F. E. Lighting, systems July 30, 1888 407,805 Kinsman, F. E. Lighting, systems July 30, 1888 407,805 Kinsman, F. E. Lighting, systems July 30, 1888 407,803 Kinsman, F. E. Lighting, systems July 30, 1888 407,803 Kinsman, F. E. Lighting, systems July 30, 1888 407,803 Hirlinamn, C. J. Lights, arc, gravily feed, gen-clutch July 30, 1888 407,803 Hirlinamn, C. J. Estieries, gelvanie July 30, 1888 407,803 Hirlinamn, C. J. Estieries, gelvanie July 30, 1888 407,603 Cooke, A. R. Dental instruments July 30, 1888 408,002 Ernst V. H. Batteries, selvanie July 30, 1888 408,002 Ernst V. H. Batteries, selvanie July 30, 1888 408,002 Ernst V. H. Batteries, selvanie July 30, 1888 408,002 Ernst V. H. Batteries, selvanie July 30, 1888 408,003 Knowles, E. R. do July 30, 1888 408,004 Knowles, E. R. do July 30, 1888 408,004 Knowles, E. R. do July 30, 1888 408,103 Knowle	407,763	Acheson, E. G	Magneto-electric	July 30, 1889
407.80	407.781	Kookogey, W. P		July 30, 1889
407.80 Votey, E. S.		Trowbridge, J. and Sheldon, S		
407.84 Thomson, E				
407.896 Marquard, F			Motors alternating	
407.895 Kinsman, F. E. Lighting, systems July 30, 1886		Pfannkuche, G		
407,996 Marquard, F.		Kinsman, F. E		
407,495 Wood, J. J. Lights, arc, gravity feed, gear-clutch July 30, 1889				
407,931 Hirlimann, C. J. Batteries, galvanic July 30, 188				
407,945 Marquard, F		History C. T.		
407,495 Speer, A				
407,950 Cooke, A. R. Dental instruments		Speer, A		
408,002 Ernst, V. H.	407,950	Cooke, A. R		
408,016 Knowles, E. R.		Thompson, A. T		
408,017 Knowles, E. R		Ernst, V. H	Motors	July 30, 1889
409,018 Knowles, E. R.				
408,042 Palmer, D. A				
408,045 Riker, A. L	408,042	Palmer, D. A	Telegraphy, fire	July 30, 1889
498,139 Ostermann, H. and Lacroix, C. Alloys July 30, 1889 408,151 Welcker, H. Medical and surgical, body-wear July 30, 1889 408,151 Welcker, H. Medical and surgical, body-wear July 30, 1889 408,152 Knowles, E. R. Alloys July 30, 1889 408,152 Knowles, E. R. Alloys July 30, 1889 408,152 Knowles, E. R. Alloys July 30, 1889 408,153 Barrett, J. A. Galvanometers July 30, 1889 408,153 Baissier, H. R. Regulators Aug. 6, 1888 408,224 Eddy, W. Telephones, calls Aug. 6, 1888 408,224 Eddy, W. Leoponotion Aug. 6, 1888 408,224 Eddy, W. Leoponotion Aug. 6, 1888 408,225 Eddy, W. Street cars, steam Aug. 6, 1888 408,225 Eddy, W. Street cars, steam Aug. 6, 1888 408,225 Short, S. H. Magneto-electric Aug. 6, 1888 408,225 Stort, S. H. Magneto-electric Aug. 6, 1888 408,225 Eddy, W. Street cars, steam Aug. 6, 1888 408,225 Eddy, W. Street cars, steam Aug. 6, 1888 408,225 Eddy, W. Street cars, steam Aug. 6, 1888 408,225 Eddy, W. Street cars, steam Aug. 6, 1888 408,225 Eddy, W. Street cars, steam Aug. 6, 1888 408,225 Eddy, W. Street cars, steam Aug. 6, 1888 408,225 Eddy, W. Street cars, steam Aug. 6, 1888 408,225 Eddy, W. Street cars, steam Aug. 6, 1888 408,225 Eddy, W. Street cars, steam Aug. 6, 1888 408,225 Eddy, W. Street cars, steam Aug. 6, 1888 408,225 Eddy, W. Street, Street, J. Eddy, Street, J. Eddy, Street, J. Eddy, Street, J. Eddy, Street, J. Aug. 6, 1888 408,225 Eddy, Street, J. Eddy, Street, J. Aug. 6, 1888 408,235 Eddy, Street, J. Aug. 6, 1888 408,235		Riker, A. L	Magneto-electric	July 30, 1889
408,158		Ostormann H and Lagrain C	Allows	
408,151 Melcker, H.		Schoon P	Ratteries galvanie	
498,157 Barrett, J. A. Galvanometers July 30, 1888 J				July 30, 1889
408,194 Riggs, H. T.				
408,205 Boissier H. R. Regulators Aug. 6, 1888				July 30, 1889
408.206 Boissier H. R				
408, 224 Eddy, W				
408,231 Griscom, W. W				
408,233	408,231			1 0 1000
408,265 Short, S. H.				1 2 4000
408,269				
408,275 Willfams, J. B				1 2 4000
408,226				
408,295 De Ferranti, S. Z	408,286	Bottome, T. D	Lights, filaments and carbons	
408,327				
408,333				
408,334 Adams T. E				
Aug. 6, 1888				
405,367		Regan, D. S	Air and gas engines, explosive	Aug. 6, 1889
408,375 Cobb, H. B.		Schroeder, C. A. J. H	Lights, filaments and carbons	Aug. 6, 1889
408,375 Cobb, H. B.				
408,377				2 4 000
408,403 Graham, C. G			do	Aug. 6, 1889
405,403 De Ferranti, S. Z			do	Aug. 6, 1889
408,404 De Ferranti, S. Z				
Applications, general Aug. 6, 1889				
408,468 Dunlap, J. W., sr				
408,484 Huebner, L. and Busse, R Magnetic locks and bolts Aug. 6, 1889 408,503 Morley, J. H Locomotion Aug. 6, 1889 408,512 Perry, F. L Systems of distribution Aug. 6, 1889 408,574 Brooks, D., jr Conductors, lead-covered Aug. 6, 1889 408,590 Currie, S. C. C Locomotion Aug. 6, 1889 408,607 Flint, F. W Electrodes Aug. 6, 1889 408,639 Van Depoele, C. J Locomotion Aug. 6, 1889 408,639 Van Depoele, C. J Locomotion Aug. 6, 1889 408,641 Van Depoele, C. J Meters, alternating Aug. 6, 1889 408,647 Blackwell, F. O Rheostats Aug. 6, 1889 408,666 McLaughlin, J. F Batteries, secondary Aug. 6, 1889 408,678 Riggs, J. W Railway signals Aug. 6, 1889 408,678 Riggs, J. W Railway signals Aug. 6, 1889 408,678 Thompson, W Cut-outs, mechanical Aug. 6, 1889 11,019 Nevens, F. W Apparel,	408,468	Dunlap, J. W., sr	Telephones, calls	Aug. 6, 1889
408,513 Perry, F. L Systems of distribution Aug. 6, 1889 408,544 Sprague, F. J Locomotion Aug. 6, 1889 408,574 Brooks, D., jr Conductors, lead-covered Aug. 6, 1889 408,600 Cerrie, S. C. C Locomotion Aug. 6, 1889 408,607 Flint, F. W Electrodes Aug. 6, 1889 408,639 Kookogey, W. P Batteries, galvanic Aug. 6, 1889 408,639 Van Depoele, C. J Locomotion Aug. 6, 1889 408,640 Van Depoele, C. J Aug. 6, 1889 408,641 Van Depoele, C. J Aug. 6, 1889 408,642 Van Depoele, C. J Aug. 6, 1889 408,643 Van Depoele, C. J Aug. 6, 1889 408,644 Van Depoele, C. J Aug. 6, 1889 408,645 Van Depoele, C. J Aug. 6, 1889 408,646 McLaughlin, J. F Batteries, secondary Aug. 6, 1889 405,671 Riggs, J. W Railway signals Aug. 6, 1889 408,676 Smith, T. J Bells Aug. 6, 1889		Huebner, L. and Busse, R.	Magnetic locks and bolts	Aug. 6, 1889
408,544 Sprague, F. J Locomotion Aug. 6, 1889 403,574 Brooks, D., jr Conductors, lead-covered Aug. 6, 1889 408,590 Currie, S. C. C Locomotion Aug. 6, 1889 408,607 Flint, F. W Lights, incandescent, special features Aug. 6, 1889 408,632 Kookogey, W. P Batteries, galvanic Aug. 6, 1889 408,639 Van Depoele, C. J Locomotion Aug. 6, 1889 408,640 Van Depoele, C. J do Aug. 6, 1889 408,641 Van Depoele, C. J Meters, alternating Aug. 6, 1889 408,642 Van Depoele, C. J Meters, alternating Aug. 6, 1889 408,642 Van Depoele, C. J Aug. 6, 1889 408,643 Blackwell, F. O Rheostats Aug. 6, 1889 408,666 McLaughlin, J. F Batteries, secondary Aug. 6, 1889 405,671 Riggs, J. W Railway signals Aug. 6, 1889 408,678 Thompson, W Cut-outs, mechanical Aug. 6, 1889 11,019 Nevens, F. W Appeal, cutting				
409,574 Brooks, D., jr Conductors, lead-covered Aug. 6, 1889 408,590 Currie, S. C. C Locomotion Aug. 6, 1889 408,607 Erickson, E. E Lights, incandescent, special features Aug. 6, 1889 408,637 Flint, F. W Electrodes Aug. 6, 1889 405,638 Van Depoele, C. J Locomotion Aug. 6, 1889 408,639 Van Depoele, C. J do Aug. 6, 1889 408,641 Van Depoele, C. J Meters, alternating Aug. 6, 1889 408,642 Van Depoele, C. J Meters, alternating Aug. 6, 1889 408,646 McLaughlin, J. F Batteries, secondary Aug. 6, 1889 405,671 Riggs, J. W Railway signals Aug. 6, 1889 405,678 Riggs, J. W Railway signals Aug. 6, 1889 408,678 Thompson, W Cut-outs, mechanical Aug. 6, 1889 11,019 Nevens, F. W Apparel, cutting Aug. 6, 1889				
408,590 Currie, S. C. C Locomotion Aug. 6, 1889 408,600 Erickson, E. E Lights, incandescent, special features Aug. 6, 1889 408,607 Flint, F. W Electrodes Aug. 6, 1889 408,629 Kookogey, W. P Batteries, galvanic Aug. 6, 1889 408,639 Van Depoele, C. J Locomotion Aug. 6, 1889 408,640 Van Depoele, C. J Meters, alternating Aug. 6, 1889 408,641 Van Depoele, C. J Meters, alternating Aug. 6, 1889 408,642 Van Depoele, C. J Aug. 6, 1889 408,654 Blackwell, F. O Rheostats Aug. 6, 1889 408,666 McLaughlin, J. F Batteries, secondary Aug. 6, 1889 405,671 Riggs, J. W Railway signals Aug. 6, 1889 408,678 Smith, T. J Bells Aug. 6, 1889 408,678 Thompson, W Cut-outs, mechanical Aug. 6, 1889 11,019 Nevens, F. W Apparel, cutting Aug. 6, 1889				
408,607 Flint, F. W Electrodes Aug. 6, 1889 408,6329 Kookogey, W. P Batteries, galvanic Aug. 6, 1889 408,639 Van Depoele, C. J Locomotion Aug. 6, 1889 408,640 Van Depoele, C. J do Aug. 6, 1889 408,641 Van Depoele, C. J Meters, alternating Aug. 6, 1889 408,642 Van Depoele, C. J Meters, alternating Aug. 6, 1889 408,647 Blackwell, F. O Rheostats Aug. 6, 1889 405,671 Biggs, J. W Batteries, secondary Aug. 6, 1889 405,676 Smith, T. J Bells Aug. 6, 1889 408,676 Thompson, W Cut-outs, mechanical Aug. 6, 1889 11,019 Nevens, F. W Appel, cutting Aug. 6, 1889	408,590	Currie, S. C. C	Locomotion	Aug. 6, 1889
405,639 Van Depoele, C. J do Aug. 6, 1889 408,641 Van Depoele, C. J do Aug. 6, 1889 408,642 Van Depoele, C. J do Aug. 6, 1889 408,647 Blackwell, F. O Rheostats Aug. 6, 1889 405,666 McLaughlin, J. F Batteries, secondary Aug. 6, 1889 405,671 Riggs, J. W Railway signals Aug. 6, 1889 405,678 Thompson, W Cut-outs, mechanical Aug. 6, 1889 11,019 Nevens, F. W Apparel, cutting Aug. 6, 1889		Erickson, E. E	Lights, incandescent, special features	Aug. 6, 1889
405,639 Van Depoele, C. J do Aug. 6, 1889 408,641 Van Depoele, C. J do Aug. 6, 1889 408,642 Van Depoele, C. J do Aug. 6, 1889 408,647 Blackwell, F. O Rheostats Aug. 6, 1889 405,666 McLaughlin, J. F Batteries, secondary Aug. 6, 1889 405,671 Riggs, J. W Railway signals Aug. 6, 1889 405,678 Thompson, W Cut-outs, mechanical Aug. 6, 1889 11,019 Nevens, F. W Apparel, cutting Aug. 6, 1889		Kookogev W P	Electrodes	Aug. 6, 1889
408,639 Van Depoele, C. J		Van Depoele, C. J	Locomotion	Aug. 6, 1889
408,540 Van Depoele, C. J	408,639	Van Depoele, C. J	do	Aug. 6, 1889
405,642 Van Depoele, C. J		Van Depoele, C. J	do	Aug. 6, 1889
408,647 Blackwell, F.O. Rheostats Aug. 6, 1889 408,666 McLaughlin, J. F. Batteries, secondary Aug. 6, 1889 405,671 Riggs, J. W. Railway signals Aug. 6, 1889 408,676 Smith, T. J. Bells Aug. 6, 1889 408,678 Thompson, W. Cut-outs, mechanical Aug. 6, 1889 11,019 Nevens, F. W. Apparel, cutting Aug. 6, 1889			Meters, alternating	Aug. 6, 1889
403,666 McLaughlin, J. F Batteries, secondary Aug. 6, 1889 403,671 Riggs, J. W Railway signals Aug. 6, 1889 408,676 Smith, T. J Bells Aug. 6, 1889 11,019 Nevens, F. W Querouts, mechanical Aug. 6, 1889 Apparel, cutting Aug. 6, 1889 Aug. 6, 1889		Blackwell F.O.	Pheostats	Aug. 6, 1889
405,671 Riggs, J. W Railway signals Aug. 6, 1889 408,676 Smith, T. J Bells Aug. 6, 1889 408,678 Thompson, W Cut-outs, mechanical Aug. 6, 1889 11,019 Nevens, F. W Apparel, cutting Aug. 6, 1889		McLaughlin, J. F	Batteries, secondary	Aug. 6, 1889
408,678 Thompson, W Bells Aug. 6, 1889 Aug. 6, 1889 11,019 Nevens, F. W Apparel, cutting Aug. 6, 1889	405,671	Riggs, J. W	Railway signals	Aug. 6, 1889
11,019 Nevens, F. W Apparel, cutting Aug. 6, 1889		Smith, T. J	Bells	Aug. 6, 1889
Apparel, cutting Apparel, cutting Apparel, cutting Aug. 0, 1853		Nevers F W	Cut-outs, mechanical	Aug. 6, 1889
	408,709	Gray, W	Telephones, systems	Aug. 13, 1889

No.	NAME.	CLASS.	DATE.
400 740	0 4 5	T 1 1 01 1 1	10 1000
408,740 408,753		Lights, filaments and carbons Locomotion	Aug. 13, 1889 Aug. 13, 1889
408,754	Salisbury, W. S.	do	Aug. 13, 1889
408,762	Speicher, J.	Telegraphy, fire	Aug. 13, 1889
408,768	Van Gestel, J. T	Magneto-electric	Aug. 13, 1889
408,778	Weilman, H. P	Ferry guardsIgniting devices, automatie	Aug. 13, 1889
408,785 408,809	Meserole A V	Batteries, secondary	Aug. 13, 1889
408,829	Cumnock, V. I	Knitting and netting, stopping	Aug. 13, 1889
408,846	Poud, C. H	Clocks, electric	Aug. 13, 1889
408,855	Schlesinger, W. M	Locomotion	Aug. 13, 1889
408,875 408,879	Hedbavny, A	HeatersFurs and pelts	
408,887	Lighthipe, J. A	Lights, arc, gravity feed, gear-elutch	
408,901	Snedekor, C. T	Conductors	
408,910	Card, G. F	Motors	
408,948		Lights, arc, gravity feed, clutch	
408,968 408,984		Bells Locomotion Locomotion	
408,986		Batteries, sccondary	
408,992	Schmidt, J. M		
409,015		Heaters	Aug. 13, 1889
409,026		Engraving machines	
409,088 409,097	Caser F V	Applications, tools and machines	Aug. 13, 1889
409,097		Locomotion	Aug. 13, 1889 Aug. 13, 1889
409,106		Batteries, secondary	Aug. 13, 1889
409,116	Patton, W. H	Locomotiou	Aug. 13, 1889
409,135		Rheostats	Aug. 13, 1889
409,136 409,146		IncrustationRailway signals	Aug. 13, 1889
409,156		Locomotion	Aug. 13, 1889 Aug. 13, 1889
409,157	Van Rysselberghe, F	Telegraphy, reed	Aug. 13, 1889
409,170	Wheeler, M. C. aud Clark, A. M.	Valve controllers	Aug. 20, 1889
409,178		Batteries, seeondary	Aug. 20, 1889
409,181 409,182	De Ferranti, S. Z	Conductors Systems of distribution	Aug. 20, 1889 Aug. 20, 1889
409,183	De Ferranti, S. Z	Connectors	Aug. 20, 1889
409,189	Gilfillan, A. W	Iudicators	Aug. 20, 1889
409,207		Galvanometers	
409,237 409,259		LocomotionBatteries, galvanic	Aug. 20, 1889 Aug. 20, 1889
409,291	Kookogev. W. P	do	Aug. 20, 1889
409,316	Butz, A. M	Thermostats	Aug. 20, 1889
409,349	De Ferranti, S. Z		
409,364 409,365	Mond I and Langer C	Vending apparatus Batteries, secondary	Aug. 20, 1889 Aug. 20, 1889
409,366		do	
409,375	Simons, R. L	Conductors, lead-covered	Aug. 20, 1889
409,390	Carson, R. D	Lights, are, positive feed, gear-clutch	Aug. 20, 1889
409,437 409,448	Vernette, F	Dental instruments	Aug. 20, 1889
409,449	Bradley ('S	Batteries, secondary Transmission of power	Aug. 20, 1889
409,450	Bradley, C. S	do	Aug. 20, 1889
409,460	Dunn, F. M., Petticord, A. and King, J. H	Alarms	Aug. 20, 1889
409,463	Higham, D	Magneto-electric	Aug. 20, 1889
409,470 409,489	Mungesser P P	Electrodes	Ang. 20, 1889
409,490	Mungesser, P. P.	do	Aug. 20, 1889
409,498	Pierce, T. J	Lights, incandescent, special features	Aug. 20, 1889
409,508	Schweuke, P	Magnetic locks and bolts	Aug. 20, 1889
409,565 409,566	De Ferranti S. Z.	Systems of distribution	Aug. 20, 1889
409,574	Gould, C. C	Telephones, systems	Aug. 20, 1889
409,603	Dickson, J. G. and R. and Snyder, P	Locomotion	Aug. 20, 1889
409,613	McLaughlin, J. F.	Type-writing	Aug. 20, 1889
409,628	Bishop, W. S	Cut-outs, thermal	Aug. 20, 1889
409,646 409,673		Magneto-electrieMedical and surgical, body-wear	
409,675	Field, S. D	Telegraphy, relays and sounders	Ang. 27, 1889
409,689	Lemp, H	Telegraphy, lightning arresters	Aug. 27, 1889
409,714	Thomson, E	Induction coils	Aug. 27, 1889
409,736 409,738	D'Unger, K	Telephones, magnetic	Aug. 27, 1889
409,752	McElroy, W. J	Applications, general Locomotion	Aug. 27, 1889
409,755	Riehards, J. E	Recorders	Aug. 27, 1889
409,756	Ries, E. E	Locomotion	Aug. 27, 1889

No.	NAME.	CLASS.	DATE.
409,757	Ries, E. E	Locomotion	'Aug. 27, 1889
409,775	De Ferranti, S. Z	do	Aug. 27, 1889
409,815	Allen, R. N	do	Aug. 27, 1889
409,852	Merrill, J. S.	Drop-lights and hangers	Aug. 27, 1889
409,891	Wills, J	Recorders	Aug. 27, 1889
409,903 409,926	De Vars, H. A. B. H Clement, L. M. and Waters, G. C	Metalloids	Aug. 27, 1889 Aug. 27, 1889
409,928	Coe, B. L	Lamp shades	Aug. 27, 1889
409,929	Collier, J. W	Lights, soekets and keys	Aug. 27, 1889
409,937	Devlin, T. C	Game counters	Aug. 27, 1889
409,968	Holmes, W. C	Medical and surgical, body-wear	Aug. 27, 1889
409,996	Meyer, M	Thermostats	Aug. 27, 1889
410,007	McLaughlin, J. F	Batteries, secondary	Aug. 27, 1889
410,013 410,023	Richard, F	Clocks, electric	Aug. 27, 1889 Aug. 27, 1889
410,027	Smith, F. H	Batteries, secondary	Aug. 27, 1889
410,049	Van Gestel, J. T	Locomotion	
410,053	Voss, R	Friction generators	Aug. 27, 1889
410,054	Waldron, C. F	Batteries, secondary	
410,059	Wolf, J. J.	Telephoue supports	
410,111 410,136	Kookogey, W. P	Batteries, secondary, applicationsBatteries, secondary	Aug. 27, 1889
410,130	Chase, H. A	Locomotion	Sept. 3, 1889
410,153	Currie, S. C. C-	Batteries, secondary, applications	Sept. 3, 1889
410,168	Lemp, H	Lights, filaments and carbons	Sept. 3, 1889
410,170	Loomis, O. P	Regulators	Sept. 3, 1889
410,180	Ongley, C. E	Applications, tools and machines	
410,181	Ongley, C. E	Elevators	
410,182 410,183	Ongley, C. E	Applications, tools and machines	Sept. 3, 1889 Sept. 3, 1889
410,184	Ongley C E	do	Sept. 3, 1889
410,185	Page, W. N	Endless belts	Sept. 3, 1889
410,189	Phalan, J. H	Bells.	
410,212	Smitb, R. C	Applications, tools and machines	Sept. 3, 1889
410,228	Wiswell, J. C	Solution, precipitation, and chlorination	Sept. 3, 1889
410,264	Blackwell, F. O	Locomotion	Sept. 3, 1889
410,265 $410,270$	Donner W H	Magneto-electric Grinding mills, grist alarms	Sept. 3, 1889
410,276	Haeniehen, F. and O	Telegraphy, relays and sounders	Sept. 3, 1889
410,293	Rockwell, F. C	Lights, incandescent, special features	Sept. 3, 1889
410,305	Wheless, M	Telephones, electric	Sept. 3, 1889
410,318	Denio, W. L	Telegraphy, fire, alarms and extinguishers	Sept. 3, 1889
410,410	Goodwin, C. Q	Conductors, lead-covered	Sept. 3, 1889
410,468 410,493	Cohon P. I.	Induction coils	Sept. 3, 1889
410,498	Daft. I.	Locomotion	Sept. 3, 1889
410,502	Donner, W. H	Grinding mills, grist alarms	Sept. 3, 1889
410,545	Furlong, L. F	Cut-outs, thermal	Sept. 3, 1889
410,555	Milliken, J. A. and C. H. and D'Amour, E	Printing, tickets	Sept. 3, 1889
410,586	Foote, T. M	Batteries, secondary, applications	Sept. 10, 1889
410,592	Davis, W. M	Magneto-electric	Sept. 10, 1889
410,637 $410,652$	Scott, G. A	Insulators Medical and surgical, body-wear	Sept. 10, 1889 Sept. 10, 1889
410,656	Statter, J. G	Magneto-electric	
410,663	Bradford, J. M	Regulators	Sept. 10, 1889
410,670	Jenney, C. D	Magneto-electrie	Sept. 10, 1889
410,680	Van Gestel, J. T		Sept. 10, 1889
410,683 410,689	Carhart, E. M		Sept. 10, 1889 Sept. 10, 1889
410,786	Cooper, A. G. and Wigzell, E. E.	Lights, incandescent, special features Recorders	
410,860	Slattery, M. M. M		Sept. 10, 1889
410,871	Bemis, S. A. and Pfingst, L		
410,876	Conkling, G	Separators	Sept. 10, 1889
410,877	Conkling, G		Sept. 10, 1889
410,886 $410,896$	Gill, O. A		- A
410,953	Brooks, D., jr		
410,964	Fitch, A. S.	Magneto-electric, hand machines	
410,965	Fitch, A. S	Magneto-electric	
410,966	Fitch, A. S	do	Sept. 10, 1889
410,976	Kerner, G. and Marx, J		Sept. 10, 1889
	Patten, F. J		
410,937			
410,988	Patten, F. J		
410,988 411,016	Patten, F. J Edison, T. A	Lights, filaments and carbons	Sept. 17, 1889
410,988	Patten, F. J	Lights, filaments and carbons	Sept. 17, 1889 Sept. 17, 1889 Sept. 17, 1889

No.	Name.	Class.	Date.
411.000	Edicon T A	Lights, filaments and carbons	Sept. 17, 1889
411,020 411,030		Motors	Sept. 17, 1889 Sept. 17, 1889
411,041	King, A. S. and Swaney, W. H.	Regulators, gas	Sept. 17, 1889
411,042		Meters	
411,088 411,093	Boardman, F. R Coughlin, W. H	Lights, arc and incandescent	Sept. 17, 1889 Sept. 17, 1889
411,120	Cole, W. R.	Bells	Sept. 17, 1889
411,124		Batteries, secondary	Sept. 17, 1889
411,133 411,137	Scribner, C. E Campbell, H. F	Annunciators Conductors, anti-inductive	Sept. 17, 1889 Sept. 17, 1889
411,138	Carter, C. H	Clocks, electric	Sept. 17, 1889
411,150	Kissell, A. S	Valve-controllers	Sept. 17, 1889
411,153 411,168	Lafferty, S. C	Clocks, electric	Sept. 17, 1889 Sept. 17, 1889
411,198	Johnson, A. E	Transmitters	Sept. 17, 1889
411,200	Lichner, F. M		~
411,230 411,238	Streeper, D. H		Sept. 17, 1889 Sept. 17, 1889
411,287	Kinsman, F. E	Lights, arc, gravity feed, gear-clutch	Sept. 17, 1889
411,301	Ries, E. E	Batteries, secondary, applications	Sept. 17, 1889
411,311 411,313	Ware, E. K	Thermostats	Sept. 17, 1889 Sept. 17, 1889
411,314	Wightman, M. J	do	Sept. 17, 1889
411,370	Barrett, S. H	Batteries, secondary	Sept. 17, 1889
411,380	Heller, F. G. A.—————————————————————————————————	Cut-outs, thermalBatteries, galvanic	Sept. 17, 1889
411,400 411,407	Wilson, J. C		Sept. 17, 1889 Sept. 17, 1889
411,414	Anthony, W. A.	Separators	Sept. 24, 1889
411,423	Bussman, O. S		Sept. 24, 1889
411,426 411,427	Dahl, O		Sept. 24, 1889 Sept. 24, 1889
411,443	Hyman, D	Street lamps	Sept. 24, 1889
411,448	Johnson, J. and Packer, E. H		Sept. 24, 1889
411,452 411,474	Klein, P. H., jr		Sept. 24, 1889 Sept. 24, 1889
411,496	Fraley, G. B		Sept 24, 1889
411,539	Wheeler, G. A.		Sept. 24, 1889
411,551 411,588	Harris, L. S		Sept. 24, 1889 Sept. 24, 1889
411.595	Hyland, D. M		Sept. 24, 1889
411,611	Read, R. H	Motors, synchronizing	Sept. 24, 1889
411,612 411,613	Read, R. H		Sept. 24, 1889 Sept. 24, 1889
411,629	Winkler, C. F		Sept. 24, 1889
411,689	Smith, C. C. and Martin, H. W	Medical and surgical, body-wear	Sept. 24, 1889
411,713 411,737	Cox, F. P Smith, D. W	Lights, arc, positive feed, gear-clutch ————————————————————————————————————	Sept. 24, 1889 Sept. 24, 1889
411,742	Fisk, A. B		
411,749	McCarthy, L	Insulators	Sept. 24, 1889
411,770 11.031	Tebbs, H. S., Lane, N. C. and Coombs, V	Telegraphy, keys	Sept. 24, 1889
411,772	Armstrong, C. G	Annunciators	
411,782	Card, G. F	Regulators	Oct. 1, 1889
411,783 411,786	Card, G. F.——————————————————————————————————		
411,787.	Currie, S. C. C		
411,801	Fletcher, J. R	Insulators	Oct. 1, 1889
411,805 411,831	Gaynor, T. F	Iron structures	
411,833	Peck, C. C		
411,840	Taylor, R. S. and Slattery, M. M. M.	Motors, alternating	Oct. 1, 1889
411,899 411,900	McCahey, J		
411,908	Stevens, F	Covering cord Valve-controllers	
411,930	Ricc, E. W., jr., and Rohrer, A. L	Magneto-electric	Oct. 1, 1889
411,935 411,936	Seymour A P		Oct. 1, 1889
411,930	Seymour, A. P	Lights, arc, special features	Oct. 1, 1889 Oct. 1, 1889
411,950	Atwater, A. S	Magneto-electric	Oct. 1, 1889
411,970	Shallenberger, O. B		
411,982 411,983	Diehl, P	Motorsdo	
411,989	Jackson, C. A	Locomotion	Oct. 1, 1889
412,013	Beebe, E. W.	Thermostats	Oct. 1, 1889
412,045 412,089	Scribner, J. F Hawkes, T. G	Reflectors	Oct. 1, 1889 Oct. 1, 1889
412,095	Johnson, I. La R	Conductors, underground	Oct. 1, 1889

No.	Name.	CLASS.	DATE.
412,115	Nix, J. L	Thermostats	
412,140	Thomson, W Von Hefner-Alteneck, F. and Hoffman, C	GalvanometersLights, arc, gravity feed, gear-clutch	Oct. 1, 1889
412,141 412,155	Anderson, A	Locomotion	Oct. 1, 1889 Oct. 1, 1889
412,157	Andersen, A	do	
412,159	Bennett, F. M	Cut-outs, mechanical	
412,165	Cox, H. B	Electrodes	
412,177	Groswith, H	Motors	Oct. 1, 1889
412,185	Hopkinson, J. and E	Regulators, alternating	
412,186	Hopkinson, J. and E	Medical and appoint had a	
412,196 412,234	Mellon, J. S Blake, R	Medical and surgical, body-wear Telephones, details	
412,323	Currie, S. C. C	Batteries, secondary	Oct. 8, 1889
412,332	Gibson, W. P	Applications, tools and machines	Oct. 8, 1889
412,333	Gibson, W. P	do	Oct. 8, 1889
412,334	Gibson, W. P	Controllers	
412,345	Smith, W. F	Batteries, secondary	
412,346	Smith, W. F	do	
412,347 412,349	Smith, W. F	Magneto-electric	
412,350	Winkler, C. F	do	
412,351	Winkler, C. F	do	
412,352	Winkler, C. F	do	Oct. 8, 1889
412,353	Winkler, C. F	do	
412,354	Wood, J. J.	Galvanometers	
412,361 412,449	Bergmann, S	Lights, sockets and keys Rheostats	
412,460	Burton, G. D	Telegraphy, circuit-closers	
412,462	Carley, C. R.	Photography, burnishing presses	
412,464	Carranza, M. and Tinoco, J. M	Igniting devices, manual	Oct. 8, 1889
412,476	Cushing, J. P	Locomotion	Oct. 8, 1889
412,528	McDougall, W. M	do	
412,529	Neu, G. S	Valve-controllers	
412,530 412,563	Neu, G. S Streeper, D. H	Railway signals	
412,567	Tracy, P. J	Regulators	
412,579	Abdank-Abakanowicz, A	Telephones, electric	
412,580	Abdank-Abakanowicz, A	do	
412,599	Coffin, C. L	Heaters	
412,605 412,606	Daft, L	Locomotion	
412,639	Lyte, F. M	Printing, setting and distributing Batteries, secondary	
412,657	Pain, R. W	Self-playing instruments	
412,666	Reno, J. W	Locomotion	
412,669	Roberts, W. S. de L. and Mollison, J. S	Batteries, thermal	
412,700	Elkins, W. H	Regulators	
$\begin{array}{c} 412,713 \\ 412,727 \end{array}$	Savers, W. B. and Sturge, U. H Carpenter, H. H	Drop-lights and hangers Batteries, secondary	
412,758	Johnston, W. C., jr	Telegraphy, circuit-closers	
412,818	Wood, J. J	Telephones, switch-boards	
412,845	Ely, G. E	Telegraphy, circuit-closers	
412,854	Kingdon, J. A.	Magneto-electric	Oct. 15, 1889
412,885	Heydler, E. F	Telephones, electric	
412,889 $412,924$	McIntire, C	Connectors	
412,925	Kinsman, F. E	Applications, general Transmission of power	
412,928	Macrae, R	Regulators	
412,932	Shallenberger, O. B	Transmission of power	Oct. 15, 1889
412,933	Shallenberger, O. B	Magneto-electric	Oct. 15, 1889
412,962	Loomis, O. P	Lights, sockets and keys	
412,971 413,008	Milliken, G. F. Zipernowsky, C. Zipernowsky, C	Telegraphy, fire	
413,011	Asmus, G. C	Magneto-electric Lights, arc, special features	Oct. 15, 1889
413,038	Douglas, W. H	Meters	
413,058	Hirseh, L	Applications, general	Oct. 15, 1889
413,083	McLaughlin, J. F	Telephones, switch-boards	
413,085 413,112	Patten, F. J	Motors, alternating	
413,133	Tudor, H ———————————————————————————————————	Batteries, secondary	
413,134	Denison, S. P	do	
413,136	Dewey, M. W	Heaters	
413,146	McCarthy, L	Insulators	Oct. 15, 1889
	Pfannkuche, G	Magneto-electric	Oct. 15, 1889
413,148			
413,151	Sprague, F. J	Locomotion	Oct. 15, 1889
		Locomotion Lighting, systems	Oct. 15, 1889 Oct. 22, 1889

No.	Name.	CLASS.	Date.
413,220	Brady, T. H	Lights, arc, special features	Oct. 22, 1889
413,250	Farciot, C. O	Compasses	Oct. 22, 1889
413,261	Mozier, A. M.	Railways, interlocking	Oct. 22, 1889
413,270	Welch, O. T.	Fire-escapes, flexible ladders	Oct. 22, 1889
413,276 413,279	Farnham, I. H	Telephones, systems	Oct. 22, 1889 Oct. 22, 1889
413,280	Hochhausen, W	do	Oct. 22, 1889
413,281	Hussey, M. L. M	Clocks, electric	
413,287	Mitchell, J.	Locomotion	Oct. 22, 1889
413,292	Thomson, E	Galvanometers	Oct. 22, 1889
413,293 413,294	Thomson, E. and Rice, E. W., jr	Systems of distribution Locomotion	Oct. 22, 1889 Oct. 22, 1889
413,308	Selden, C	Telephones, magnetic	
413,309	Shapleigh, W	Metal founding, soft metals	Oct. 22, 1889
413,331	Snelgrove, W	Scale beams	Oct. 22, 1889
413,337	Eickemeyer, R	Magneto-electric	
413,338	Eickemeyer, R	GalvauometersBatteries, secondary	Oct. 22, 1889 Oct. 22, 1889
413,339 413,340	Gerry, J. H	Clocks, electric	
413,345	Kookogey, W. P	Batteries, galvanic	Oct. 22, 1889
413,353	Tesla, N	Systems of distribution	Oct. 22, 1889
413,363	Eickemeyer, R	Magneto-electric	Oct. 22, 1889
413,409	McElroy, D. S	Railway signals	
413,410 413,411	McElroy, D.S.	Electro-magnets	
413,412	McElroy, D. S	Railway signals	
413,429	Baker, E. B	Telegraphy, lightning arresters	
413,436	Decrow, W. E	Telegraphy, fire	
413,438	Eggers, F. F	Alloys	
413,442 $413,504$	Gennert, E. F.	Lights, incandescent, special features	
413,512	Hull, R. C	Motors	
413,568	Shaffer, C. H	Thermostats	
413,604	Hunter, R. M	Locomotion	
413,629	Phillips, W. A	Covering cord	Oct. 22, 1889
413,636 413,637	Van Gestel, J. T.	Lights, incandescent	
413,703	Wurts, A		
413,707	Campbell, H. F	Conductors, anti-inductive	Oct. 29, 1889
413,708	Coad, T		
413,731 413,735	Poole, C. P. Schaefer, L.		
413,782	Hall, A. W		
413,795	Stockwell, J. O. and Barrett, A	Anti-induction devices	Oct. 29, 1889
413,810	Paget, L	Systems of distribution	Oct. 29, 1889
413,812	Ritchie, A. M		
413,813 413,818	Root, H. C. Adams, T. E.	Cut-outs, thermal	
413,848	Crull, E. S		Oct. 29, 1889
413,879	Winder, W	Connectors	Oct. 29, 1889
413,890	Bemis, S. A	Railway cars, trucks	Oct. 29, 1889
413,960 413,984	Thone F	Railway cars, brakesRegulators	Oct. 29, 1889
413,986		Motors, alternating	
414,000	Amet, E. H	Vending apparatus	Oct. 29, 1889
414,025	Cumnock, V. I	Spinning, stopping	Oct. 29, 1889
414,043 414,049	Hunter R M	Regulators Loconotion	Oct. 29, 1889
414,050	Hunter, R. M	Loconiotion	Oct. 29, 1889
414,052	Immich, M	Regulators	Oct. 29, 1889
414,076		Galvanometers	
414,081	Koperts, I. L	Batteries, galvanic	Oct. 29, 1889
414,085 414,130	Seifert, W. F. R	Lights, arc, gravity feed, clutch	Oct. 29, 1889
414,132	Adams, S. J	Telephones, supports	Oct. 29, 1889
414,141	Chapman, F. G. and Dearing, F. M	Lights, arc, positive feed	Oct. 29, 1889
414,155	Sprague F L and O'Shaveharen D F	Telegraphy, fire, alarms and extinguishers	Oct. 29, 1889
414,172 414,191	Conant. H. J	Locomotion Regulators	Nov. 5, 1889
414,220	Hussey, C. A	Batteries, galvanic	Nov. 5, 1889
414,245	Pfannkuche, G	Magneto-electric	Nov. 5, 1889
414,266	Thomson, E	Induction coils	Nov. 5, 1889
414,267	Carpenter H H	Thermostats Metal working, miscellaneous	Nov. 5, 1889
414,288 414,289	Christy, W	Locomotion	Nov. 5, 1889
414,295	Cox, C. A. and Cox, J. F.	Railway brakes, derailment	Nov. 5, 1889
414,308		Alarms, burglar	

No.	NAME.	CLASS.	DATE.
414,310	Haskins, C. D. and Scribner, C. E.	Telephones, systems	Nov. 5, 1889
414,317	Hussey, C. A	Batteries, galvanic	
414,318 414,327	Hussey, C. A	Conductors, underground	Nov. 5, 1889 Nov. 5, 1889
414.339	Spaulding, H. C	Meters	
414,343	Thackeray, W. T. W. and Huru, I	Anuunciators	Nov. 5, 1889
414,356	Wirt, C	Telegraphy, lightning arresters	Nov. 5, 1889
414,362 414,399	Anderson, A	Connectors ————————————————————————————————————	
414,400	Goodson, G. A.	do	Nov. 5, 1889
414,418	Leonard, H. W	Car-brakes	
414,422 414,438	Lockwood, J. E.	Galvanometers Batteries, secondary	
414,492		Telegraphy, quadruplex	
414.541	Hopkinson, J.	Systems of distribution	Nov. 5, 1889
414,583	Reams, J. M	Locomotion	Nov. 5, 1889
414,595	Van Depoele C. I	Meters	Nov. 5, 1889 Nov. 5, 1889
414,612	Cox-Walker, E. and Swinton, A. A. C	Bells	Nov. 5, 1889
414,624	Young, C. I	Telegraphy, lightning arresters	Nov. 5, 1889
414,626	Barrett, J. A	Induction coils	Nov. 5, 1889
414,627 414,637	Goodson, G. A.	Batteries, galvanicApplications, tools and machines	Nov. 5, 1889 Nov. 5, 1889
414,645	Kookogey, W. P	Railway signals	Nov. 5, 1889
414,659	Seafert, W	Magneto-electric	Nov. 5, 1889
414,668 414,681	Culver F F	Medical and surgical, body-wear Railways, traction, underground	Nov. 5, 1889 Nov. 12, 1889
414,686	Punn. P. J	Bridges, girders and columns	Nov. 12, 1889
414,695	Gaynor, T. F	Applications, tools and machines	Nov. 12, 1889
414,714	Leonard, M. B.	Heaters	Nov. 12, 1889
414,741 $414,742$	Wilson, G. W	Lights, incandescent	Nov. 12, 1889 Nov. 12, 1889
414,757	Diehl, P		
414,758	Diehl, P	do	Nov. 12, 1889
414,763	Estabrook, W. W	Igniting devices, automatic	Nov. 12, 1889
414,764 $414,773$	Euphrat, F	Vending apparatusRailway signals	Nov. 12, 1889 Nov. 12, 1889
414,792	Bottome, T. D	Cut-outs, thermal	Nov. 12, 1889
414,798	Dawes, A	Drop-lights and hangers	Nov. 12, 1889
414,860 414,866	Mehren, J. F	Electro-deposition ————————————————————————————————————	
414,868	Merren, J. F. Morgan, F. E	Telegraphy, fire	
414,879	Edgecomb, D. W. and Terry, C. A	Annunciators	Nov. 12, 1889
414,883	Harrison, E. L		
414,900 414,922	Geisenhöner, H.	Magneto-electric Lights, sockets and keys	
414,933	Adams, F. U		
414,943	Dewey, M. W	Batteries, secondary, applications	Nov. 12, 1889
414,953		Batteries, secondary	
414,961 414,966		Telephones, supportsCut-outs, mechanical	
414,970	Camp, H. B	Conductors, underground	Nov. 12, 1889
414,996	Ries, E. E	Car-brakes	Nov. 12, 1889
$\frac{415,007}{415,024}$		ThermostatsElectro-deposition	
415,070	Short, S. H	Locomotion	Nov. 12, 1889
415,110	Johnson, I. La R	Conductors, underground	Nov. 12, 1889
415,165	Finney, J. R	Locomotion	Nov. 12, 1889
415,168 $415,182$		Railways, interlocking ————————————————————————————————————	
415,190		Magneto-electric	
415,252	McDonald, R. T. and Cain, J.	Locomotive head lights	Nov. 19, 1889
415,262 415,274		Conductors, lead-covered	
415,305		Medical and surgical, body-wearSoldering clamps	
415,324	Green, L. R	Bridges, girders and columns	Nov. 19, 1889
415,325	Green, L. R	do	Nov. 19, 1889
$\begin{array}{c} 415,327 \\ 415,329 \end{array}$	Rennedy, P. and Diss, C. J.	Batteries, secondary	Nov. 19, 1889 Nov. 19, 1889
415,330		Lead	
415,331	Payen, C	Batteries, secondary	Nov. 19, 1889
415,332	Payen, C.	Metal founding in metal molds	Nov. 19, 1889
415,333 415,335	Reese J	Batteries, secondaryLights, incandescent	Nov. 19, 1889
415,338		Car-brakes	
415,345	Moreton, F	Batteries, galvanic	Nov. 19, 1889
415,347	Payen, C	, Lead	Nov. 19, 1889

No.	NAME.	CLASS.	DATE.
415,348	Payon C	Lead	Nov. 19, 188
415,349		do	
415,350	Pullman H. B.	Motors	Nov. 19, 1889
415,363		Magneto-electric	
415,417			
415,487	Whittingham, G. H	Regulators	
415,490		Batterics, secondary	
415,491	Bates, P. S	Meters	Nov. 19, 188
415,504	Fowler, G	Insulators	Nov. 19, 188
415,571		Lights, arc, gravity feed, clutch	
415,572	Scribner, C. E	do	Nov. 19, 188
415,573	Scribner, C. E	Telephones, systems	Nov. 19, 188
415,574	Scribner, C. E		Nov. 19, 188
415,576	Siemens, W		
415,577 415,578	Skelton, F. A.	Meters Telegraphy, repeaters	
415,593	Watson, J. E		
415,600		Batteries, secondary	Nov 19 188
415,617	Cody. J. L.	Passenger cars	Nov. 19, 188
415,628	Farmer, J. R		
415,629	Foote, G. L	Telegraphy, fire	Nov. 19, 188
415,641	Jaeger, C. L	Regulators	Nov. 19, 188
415,644		Electrolysis	
415,683	Payen, C.	Lead	Nov. 19, 188
415,695	Belding, W. S	Magneto-electric	Nov. 26, 188
415,696		do	
415,697	Belding, W. S	do	Nov. 26, 188
415,700		Telephones, magnetic	
415,710		Locomotion	
415,738	Thomas F	Electrolysis	Nov. 20, 188
415,747 415,748		Metersdo	
415,749	Thomson, E	Inductoriums, transformers, stationary	Nov. 26, 188
415,751	Wesslen R II and Trantwein G	Conductors, underground	Nov. 26, 188
415,752	Wesslan R H	do	Nov. 26, 188
415,758	Wiesebrock, F. W. and Huber, E	Telethermometers	Nov. 26, 188
415,765		Telephones, systems	
415,766	Currie, S. C. C.	Batteries, secondary, applications	Nov. 26, 188
415,805		Machines for winding	
415,806		Magneto-electric	
415,817	Lane, F. A.	Clocks, clectric	Nov. 26, 188
415,856	Carpenter, C. E.	Heaters	Nov. 26, 188
415,864		Insulating materials	
415,871		Valve-controllers	
415,877	Mont-Ross, J. A	Paper manufactures, feeding	Nov. 26, 188
415,896		Drop-lights and hangers	
415,897	Bradner, W. F	Annunciators	Nov. 26, 188
415,915			
415,936 415,962	Enholm O A	Batterics, secondary	Nov. 20, 100
415,963	Enholm O A	Batteries, galvanic	Nov 26, 188
415,975	Otto, G	do	Nov. 26, 188
415,981		Batteries, secondary	Nov. 26, 188
415,990	Zigang, J. P.	Bells	Nov. 26, 188
416,006	Moennich, P	Indicators	Nov. 26, 188
416,013	Riker, A. L	Magneto-electric	Nov. 26, 188
416,051	Chassagne, P. J	Lights, sockets and keys	Nov. 26, 188
416,090	Best, A. W. and Underwood, H. G	Gearing	Nov. 26, 188
416,092	Clawson, C. C	Kaleidoscopes	Nov. 26, 188
416,103	Harter, G. A	Magnetie locks and bolts	Nov. 26, 188
416,122	Park, W. R	Insulators	Nov. 26, 188
416,126	Smith, W. F	Batteries, secondary	Nov. 26, 188
416,131	Weeden, H. U	Urinals	Nov. 26, 188
416,138	Wooden R H	Conductors, underground	Nov. 26, 188
416,143 416,144	Wesslan R H	Conductors, underground	Nov. 26, 188
416,148	Slocum E. L.	Clocks, electric	Nov. 26, 188
416,169	Keith, N. S.	Regulators	Dec. 3 188
416,189	Stone, J. B	Cords and ropes	Dec. 3 188
416,191	Tesla, N	Motors, alternating	Dec. 3 188
416,192	Tesla, N	do	Dec. 3, 188
416,193		do	
416,194	Tesla, N	do	Dee. 3, 188
416,195	Tesla, N	do	Dec. 3, 188
416,234	Perot, E. S	Conductors, underground	Dec. 3, 1889
416 205	Perot. E.S	do	Dec. 3, 1889
416,235 $416,240$	Schmid, A	2.0	

No.	Name.	CLASS,	DATE.
416.243	Tirrell, J. P	Bells	Dec. 3, 1889
416,254	Cooley, C. A	Covering cord	Dec. 3, 1889
416,275	Scribner, C. E	Telephones, systems	
416,284 416,288	Adams, T. E	Connectorsdo	
416,289	Ellinwood, A. E	Locomotion	
416,299	Pumpelly, J. K.	Batteries, secondary	
416,339	Lemp, H	Meters	
416,350	Thomson, E Dewey, M. W	Heaters	
416,360 416,366	Johnson, T. L	Locomotion	
416,368	Jordan, L. F	Drop-lights and hangers	
416,381	Smith, R. D. O	Alarms	Dec. 3, 1889
416,406	Frith, F. W	Railway signals	
416,443	Cooley, W. H	Magneto-electric	
416,447	Dawson, E. C	Drop-lights and hangers	
416,476	Lyon, E. H	Telephones, electric	
416,483	McMahon, J. P	Telegraphy, fire	Dec. 3, 1889
416,513	Speicher, J	do	Dec. 3, 1889
416,572	Convert D'F S and Pumpelly T E	Telegraphy, circuit-closers	
416.573 416,604	Covert, D.E. S. and Pumpelly, J. K	Batteries, secondary	
416,605		Batteries, secondary	Dec. 3, 1889
416,611	Hochhausen, W	Lighting, systems	Dec. 3, 1889
416,612	Hochbausen, W	Lights, systems and appliances	Dec. 3, 1889
416,632	Leber. L. H	Lights, incandescent	Dec. 3, 1889
416,635 416,654	Thungen, A	Igniting devices, automatic————————————————————————————————————	Dec. 3, 1889 Dec. 3, 1889
416,655		do	Dec. 3, 1889
416,662	Bartlett, S. H	Friction generators	
416.682	Laurence, W. B	Lamp-shades	Dec. 3, 1889
416,712		Annunciators	Dec. 10, 1889
416,713		Railway signals	Dec. 10, 1889
416,720 416,732		Magneto-electric Telegraphy, transmitters	Dec. 10, 1889 Dec. 10, 1889
416,742	Redfield, C. L	Printing, matrix-making	Dec. 10, 1889
416,743	Redfield, C. L	do	Dec. 10, 1889
416,745	Rice, E. W., jr	Lamp-shades	Dec. 10, 1889
416,746	Sack, J	Regulators	Dec. 10, 1889
416,754 416,762	Thomson, E		Dec. 10, 1889 Dec. 10, 1889
416,779		Fire-engines, stationary	Dec. 10, 1889
416,803	Phillippi, F. A	Medical and surgical, body-wear	Dec. 10, 1889
416,808	Scribner, C. E		Dec. 10, 1889
416,809 416,847	Scribner, C. E	Lights, arc, special features	Dec. 10, 1889 Dec. 10, 1889
416,862	Schardt B and Lutzenherger W	Lights, arc, special features	Dec. 10, 1889
416,873	Tilghman, B. C	Heaters	Dec. 10, 1889
416,920	Jenkins, W. F	Locomotion	Dec. 10, 1889
416,971		Alarms, burglar	Dec. 10, 1889
417,009		Telephones, electric	Dec. 10, 1889
417,013 417,018	Goodridge, W. M	Heaters Telephones, systems	Dec. 10, 1889 Dec. 10, 1889
417,052		Indicators	
417,055	Logan, C. H	Batteries, secondary	Dec. 10, 1889
417,075	Newman, N	Igniting devices, automatic	Dec. 10, 1889
417,086	Pratt, C. K	Elevators	
417,087 417,088	Pumpelly J K	Batteries, secondary	Dec. 10, 1889 Dec. 10, 1889
417,089		Regulators	
417,095	Saville, J. J. and Winspear, J. H	Locomotion	Dec. 10, 1889
417,101		Extinguishers, gas	Dec. 10, 1889
417,117		Alarms	
417,120 417,121		Locomotion	
417,122		do	
417,132	Baldwin, C. W	Applications, tools and machines	Dec. 10, 1889
417,158	Ernst. V. H	Batteries, secondary	Dec. 10, 1889
417,188		Railway signals	Dec. 10, 1889
417,198 417,217		Igniting devices, automatic Telegraphy, relays and sounders	Dec. 10, 1889 Dec. 17, 1889
417,258	Loy, I. W. and O'Toole, R.	Railway signals	Dec. 17, 1889
417,259	Main, W.	Locomotion	Dec. 17, 1889
417,271	O'Connell, J. J	Telephones, systems	Dec. 17, 1889
417,290	Sperry, E. A	Batterics, galvanic	Dec. 17, 1889
417,304	Wilson, J. C.	Anti-induction devices	Dec. 17, 1889

No.	Name.	CLASS.	DATE.
417,305	Wilson, J. C	Anti-iuduction devices	Dec. 17, 1889
417,338	Ries, E. E	Locomotion	Dec. 17, 1889
417,392		Batteries, galvanic	Dec. 17, 1889
417,402	Balsley, U. H		Dec. 17, 1889
417,436	Cooper, A. S	Telegraphy, automatie Batteries, galvanic	Dec. 17, 1889
417,438	McElroy, D. S	Railway car	Dec. 17, 1889
417,458	Wolff, C. H	Batteries, galvanie	Dec. 17, 1889
417,474	Diehl, P.	Motors	Dec. 17, 1889
417,487	Jenney, C. D	Regulators	Dec. 17, 1889
417,497	Morgan, R. A., jr	Cut-outs, mechanical	
417,501	Norton, H. L. and Cooke, F. W.	Time checks	
417,511	Rosebrugh, A. M. aud T. RShawhan, J. F	Anti-induction devices Lights, arc, positive feed	Dec. 17, 1888
417,516 417,525	Stitzel, F	Railways, automatic signals	Dec. 17, 1889
417,526	Stitzel, F. and Weinedel, C	do	Dec. 17, 1889
417,654	Van Depoele, C. J	Locomotion	Dec. 17, 1889
417,660	Barney, W. C	Telephones, details	
417,668	Dihlmann, C	Systems of distributiou	Dec. 17, 1889
417,680	Pain, R. W	Self-playing iustruments, pneumatic Lights, incandescent	Dec. 17, 1889
417,685 417,688	Tatham, J	Conductors, underground	
417,694	Winsor, P. and Wurts, A	Telegraphy, lightning arresters	Dec. 17, 1889
417,695	Winsor, P	do	Dec. 17, 1889
11,047	Swan, J. W	Batteries, secondary	Dec. 17, 1889
417,742	Prentiss, H. S	Telegraphy, circuit-closers	Dec. 24, 1889
417,747	Short, S. H	Locomotion	
417,753 417,758	Spellier, L. H Von der Kammer, J	Clocks, electricCut-outs, thermal	Dec. 24, 1889
417,763	Whilton, F. J	Applications, general	Dec. 24, 1889
417,787	Packard, J. W.	Lights, sockets and keys	Dec. 24, 1889
417,788	Packard, J. W	do	Dec. 24, 1889
417,789	Packard, J. W	Lights, incandescent	Dec. 24, 1889
417,794	Schmid, A. and Tesla, N.	Magneto-electric	Dec. 24, 1889
417,814	Delany, P. B	Batteries, galvanie	Dec. 24, 1889
417,842 417,920	Hunter, R. M	Heaters	
417,923	Kneuper, F. J	Induction coils	Dec. 24, 1889
417,926	Lane, F. A	Bells	Dec. 24, 1889
417,927	Lane, F. A	Clocks, clectric	Dec. 24, 1889
417,928	Lane, F. A	do	
417,931	Miatt, G. W.——————Blaekwell, F. O.————	Games and toys	
417,974 417,992	Dell, J		Dec. 24, 1889 Dec. 24, 1889
417,998	Emmet, W. Le R		Dec. 24, 188
418,041	Mitchell, N. C	Separators	Dec. 24, 188
418,069		Store service	Dec. 24, 1889
418,070		do	Dec. 24, 1889
418,071	Rogers, H. G	Magnety electric hand machines	Dec. 24, 1889
418,120 418,125	Hamblet, I	Magneto-clectric, hand machines	Dec. 24, 1889
418,134		Reducing and separating, metallurgy	
418,140	Osburn, H. G.	Batteries, secondary	Dec. 24, 188
11,049		Store service	
418,198		Heaters	
418,227		Electrodes Motors, alternating	
418,248 418,249		Telegraphy, lightning arresters	
418,258	Wiley, E. C	Railway signals	Dec. 31, 188
418,270	Braun, D. J	Lights, incandescent, special features	Dec. 31, 188
418,284	Healy, C. L	Telegraphy, quadruplex	Dec: 31, 188
418,295	Redfield, L. L	Printing, matrix making	Dec. 31, 188
418,301	Wood, J. J.	Magneto-electric	Dec. 31, 188
418,302 418,303	Wood J J	Regulatorsdodo	Dec. 31, 188
418,322	Rounseville, G. L. B	Telegraphy, fire	Dec. 31, 188
418,369	Huff, G. E	Insulators	Dec. 31, 188
418,373	Libbey, H. W	Locomotiou	Dec. 31, 188
418,402	Darling, W. H.	Car-brakes	Dec. 31, 188
418,426	Thone, F'	Lights, sockets and keys	Dec. 31, 188
418,443 418,444	Rumell J H	Telegraphy, relays and sounders Lights, are, gravity feed, gear-clutch	Dec. 31, 188
418,472	Pratt. C. A	Meters Meters	Dec. 31, 188
418,474	Saunderson, L	Lights, filaments and carbons	Dec. 31, 188
	Woolf 4 É	Batteries, secondary	Dec. 31, 188
418,483	77 0011, 11. 2	Indicator's	

No.	Name.	Class.	DATE.
418.551	Burt, M. C	Gas	Dec. 31, 1889
418,559	Frager, A. J	Meters	Dec. 31, 1889
418,560	Frost, É	Bells	Dec. 31, 1889
418,636	Baillard, G. C	Lights, incandescent, special features	Dec. 31, 1889
418,652 418,653	Patten, F. J	Transmission of powerdodo	Dec. 31, 1889 Dec. 31, 1889
418,654	Patten, F. J	Motors, alternating	Dec. 31, 1889
418,655	Patten, F. J	Transmission of power.	Dec. 31, 1889
418,659	Stanley, W., jr	Regulators, alternating	Dec. 31, 1889
418,664	Dreyer, W	Printing, setting and distributing Motors	Dec. 31, 1889 Jan. 7, 1890
418,678 418,682	Christie, G. E	Telephones, supports	Jan. 7, 1890 Jan. 7, 1890
418,685	Claus, P. and Gengenbach, E	Magneto-electric	Jan. 7, 1890
418,700	Dey, H. E	Batteries, secondary	
418,701	Dey, H. E	Batteries, secondary, applications	Jan. 7, 1890
418,702 418,703	Dey, H. E	do	Jan. 7, 1890 Jan. 7, 1890
418,704	Duggan, J. A.	Locomotion	
418,718	Henning, B. S	do	Jan. 7, 1890
418,748	Prescott, G. B., jr	Batteries, secondary, applications	Jan. 7, 1890
418,757 418,758	Scribner, C. E	Lights, are Lights, are, positive feed, clutch	Jan. 7, 1890 Jan. 7, 1890
418,766	Smith, J. B	Insulators	Jan. 7, 1890
418,778	Armstrong, C. G.	Telegraphy, fire	Jan. 7, 1890
418.824	Sperry, E. A	Telegraphy, lightning arresters	Jan. 7, 1890
418,837	Armstrong, C. G	Batteries, galvanic	
418,843 418,850	Johnson, D. E. Pendleton, J. H., Bryson, A. J. and Ticrs, C.	LocomotionRailway signals	
418,853	Storey, I. E	Magneto-electric	Jan. 7, 1890
418,855	Storey, I. E	Lights, sockets and keys	Jan. 7, 1890
418,856	Storey, I. E	Locomotion	
418,868 418,871	Finck, J	AnnunciatorsIndicators	
418,889	Cooper, A. J. and Wigzell, E. E	Bathometers	
418,893	Hunter, R. M	Locomotion	
418,910	Cox, C. A. and J. F	Railway signals	
418,911	Dewey, M. W	Heaters	
418,912 418,975	Dewey, M. W Emme, C. A	Systems of distribution Door bells	
418,987	Russell, E. C		
419,013	Grimley, C. H	Medical and surgical, body-wear	
419,032	Coffin, C. L		Jan. 7, 1890
419,033	Niles, H. B		Jan. 7, 1890 Jan. 7, 1890
419,059 419,068	Randall, C. A	Printing, hand stamps	Jan. 7, 1890
419,096	Wynne, F	Locomotion	Jan. 7, 1890
419,111	Casey, F. M	Applications, tools and machines	Jan. 7, 1890
419,166		Locomotion	
11,053 419,186	Culman D 4 ir	Medical and surgical, body-wear Lamp shades	Jan. 7, 1890
419,245	Currie, S. C. C	Motors	Jan. 14, 1890
419,264	Kennelly, A. E	Meters	Jan. 14, 1890
419,282		Heaters	
419,30s 419,309		Locomotion do	Jan. 14, 1890 Jan. 14, 1890
419,312		Alarms	
419,313	Cade, B		
419,314	Cade, B	Locomotion	Jan. 14, 1890
419,355		Street cars, steam	
419,365 419,367	Shallenberger, O. B	Connectors	Jan. 14, 1890 Jan. 14, 1890
419,487	Wollensak, J. F	Telegraphy, circuit-closers	Jan. 14, 1890
419,524	Huber, J. H	Lamp shades	Jan. 14, 1890
419,588	Kitsee, I		
419,617 $419,618$	Adams, T. E	Lights, sockets and keys Locomotion	Jan. 14, 1890 Jan. 21, 1890
419,633	Burnley, W	Batteries, galvanic	Jan. 21, 1890
419,642	Cornog, I. P.	Insulators	Jan. 21, 1890
419,645	Culbertson, J. N	Telephones, systems	Jan. 21, 1890
419,660	Gutmann, L	Systems of distribution	Jan. 21, 1890
$\frac{419,661}{419,662}$	Gutmann, L	Magneto-electricSystems of distribution	
419,663	Gutmann, L	by stems of distribution	Jan. 21, 1890
			T 01 1000
419,664	Gutmann, L	Motors, alternating	
	Hicks, T. H		Jan. 21, 1890

No.	Name.	CLASS.	DATE.
419,710	Robbins, A. C	Telegraphy, fire, alarms and extinguishers	Jau. 21, 1890
419,727	Sorley, C	Batteries, secondary	Jan. 21, 1890
419,728	Sorley, C		
419,730 4 419,731	Stanley, L. T	Batteries, galvanic	
419,733	Story, C. B		Jan. 21, 1890
419,740	Wagner, F. C.	Regulators	Jan. 21, 1890
419,753	Darling, W. H	Locomotion	Jan. 21, 1890
419,766	Glaeser, A	Magnetic locks and bolts	
419,771	Hawkesworth, R. W		
419,774	Irish, W. E	Batteries, galvanie	Jan. 21, 1890
419,776 419,808	Jones, A. B	Clocks, electric	Jan. 21, 1890
419,829	Cobb, S. B	Lights, incandescent	
419,841	Dewey, M. W	Locomotion	
419,861	Marvin, H. N	Transmission of power	
419,862	Mehren, J. F	Batteries, secondary	Jan. 21, 1890
419,902	Wider, ECarpenter, H. H	Telegraphy, fire, alarms and extinguishers	Jan. 21, 1890
419,923	Catz, J.	Conductors Alarms	
419,924 419,962	Lane, G. M	Lights, incandescent, special features	Jau 21, 1890
419,967	Lane, G. M		
420,057	Haight, H. J	Indicators	Jan. 28, 1890
420,070	Howey, W. J.	Alarius, burglar	
420,077	Lemp, H		
420,079 420,080	Marvin, H. N	Motors, alternating	
420,080	O'Connell, J. J	Telephones, systems	
420,096	Pfluger, C. A	Telegraphy, lightning arresters	Jan. 28, 1890
420,101	Reno, J. W.	Locomotion	
420,102	Richard, F		
420,109	Scribner, C. E		
420,117	Sperry, E. A		
420,138 420,139	Wood, J. J. Barringer, J. J. and Johnston, T. H		
420,171	Seely, J. A		
420,173	Speicher, J	Telegraphy, fire	Jan. 28, 1890
420,183	Beach, F. G. and Cook, F. B	Telephones, systems	Jan. 28, 1890
420,198	Guerrant, G. M.	Lighting, systems	
420,214	Smith, W. F.	Meters	
420,217 420,234	Thompson, W. and Gartner, A. Johnson, G. A.	IndicatorsBatteries, secondary	
420,240	McLaughlin, J. F	Telegraphy, printing	
420,255	Taylor, J. D.	Telephones, calls	Jan. 28, 1890
420,300	Hicks, T. H	Electrodes	Jan. 28, 1890
420,314	Schefbauer, R		
420,334 420,351	Conkling, G	Antomatic devices	Jau. 28, 1890
420,351	Rogers, J. H		
420,370		Lights, sockets and keys	
420,384	Holcombe, A. G	Telegraphy, fire	Jan. 28, 1890
420,391	Rice, E. W., jr	Lights, incandesceut, special features	Jan. 28, 1890
420,393		Transmitters	
420,396 420,398		Regulators	
420,393		Galvanometers	
420,444	Farrell, G	Cut-outs, thermal	Feb. 4, 1890
420,469	Serrell, L. W. and Lufkin, H. L	Regulators	Feb. 4, 1890
420,500	Storey, I. E	Drills	
420,543	Peckham, E	Street cars, steam	
420,544 $420,545$	Peckham, E	Street cars————————————————————————————————————	
420,552	Brown J. E and J. F	Lights, incandescent, special features	Feb. 4, 1890
420,594	Edison, T. A	Telegraphy, quadruplex	Feb. 4, 1890
420,611	Stephens, J. E	Medical and surgical, body-wear	Feb. 4, 1890
420,622	Dickerson, E. N	Cut-onts, electro-magnetic	Feb. 4, 1890
420,635	Copper W	Insulators	
-420,638 420,641		Conductors Heaters	Feb. 4, 1890 Feb. 4, 1890
420,648		do	
420,649	Williams, J. M	Indicators	Feb. 4, 1890
420,693	McElroy, D. S.	Car brakes	Feb. 4, 1890
420,697	Powell, N. M.	Alarms, burglar	Feb. 4, 1890
420,705	Stewart, J.	Lights, sockets and keys-	Feb. 4, 1890
	Storrout		
420,706 420,710	Stewart, J	Electrodes	Feb. 4, 1890 Feb. 4, 1890

No.	NAME.	Class.	DATE.	
420,762	Bishop, J. D	Meters	Feb. 4, 1890	
420.764	Bradley, C. S	Batteries, thermal		
420,771	Clark, J. H	Applications, tools and machines		
420,777	Davis, F. E. and Scott, J., jr	Covering cord		
420,816	Marvin, H. N	Transmission of power		
420,833	Robertson, J. H	Telegraphy, automatic		
420,834	Seib, G. A	Magnetic locks and bolts	Feb. 4, 1890	
420,840 420,850	Thomas, M. E	Medical and surgical, body-wear	Feb. 4, 1890 Feb. 4, 1890	
420,851	Wood, F. B	do	Feb. 4, 1890 Feb. 4, 1890	
420,852	Wood, F. B	do	Feb. 4, 1890	
420,858	Boss, G. W	Railway signals	Feb. 4, 1890	
420,859 420,881	Boss, G. WLanghans, R	Lights flaments and saybans	Feb. 4, 1890	
420,882	Lemp, H. and Wightmau, M. J.	Lights, filaments and carbons	Feb. 4, 1890 Feb. 4, 1890	
420,884	Mercadier, E. J. P	Telegraphy, multiplex		
420,890	Randall, C. A	Indicators	Feb. 4, 1890	
420,894	Thomson, W	Rheostats	Feb. 4, 1890	
420,906 420,924	Johnson, W. S.——————————————————————————————————	Batteries, secondary, applications Magneto-electric	Feb. 4, 1890 Feb. 4, 1890	
420,936	Hall, O. S	Medical and surgical, body-wear	Feb. 11, 1890	
420,954	Nutting, S. E	Applications, general	Feb. 11, 1890	
420,955	Nutting, S. E.	do	Feb. 11, 1890	
420,964 420,975	Robinson, W. HSorley, C	Indicators	Feb. 11, 1890 Feb. 11, 1890	
420,984	Bayne, G. G	Telegraphy, lightning arresters	Feb. 11, 1890	
421,006	Libbey, H. W	Telephones, magnetic	Feb. 11, 1890	
421,011	Newland, G. F	Telephones, details	Feb. 11, 1890	
421,014 431,048	Polk, W. R	Automatic fans	Feb. 11, 1890 Feb. 11, 1890	
421,053	Nutting, S. E	do	Feb. 11, 1890	
421,067	Currie, S. C. C	Electro-magnets	Feb. 11, 1890	
421,081	Mehren, J. F	Batteries, galvanic	Feb. 11, 1890	
421,088 421,090	Anthony, W. A	Conductors, underground	Feb. 11, 1890 Feb. 11, 1890	
421,114	Stewart, W. M	Telephones, switch-boards	Feb. 11, 1890	
421,169	Hewett, E. M. G	Batteries, galvanic	Feb. 11, 1890	
421,177	Lemp, H	Cut-outs, electro-magnetic	Feb. 11, 1890	
421,179 $421,180$	Little, E. W Little, E. W	Cut-outs, mechanicalCut-outs, thermal	Feb. 11, 1890 Feb. 11, 1890	
421,185	Miner, W. M	Heaters	Feb. 11, 1890	
421,193	Rice, É. W., jr	Motors, alternating	Feb. 11, 1890	
421.195	Ross. F. and Franzen, A	Regulators	Feb. 11, 1890	
421,207 421,208	Thomson, E Thomson, E	Cut-outs, electro-magneticSystems of distribution	Feb. 11, 1890 Feb. 11, 1890	
421,214	White, G. W	Telegraphy, relays and sounders	Feb. 11, 1890	
421,222	Alton, G. H. and Wakefield, W. O	Magneto-electric	Feb. 11, 1890	
431,239		Railway signals	Feb. 11, 1890	
421,240 421,294	Lyke, N	Cut-outs, thermal Medical and surgical, bath	Feb. 11, 1890 Feb. 11, 1890	
421,304	Rae, F. B	Locomotion		
421,305	Rae, F. B	do	Feb. 11, 1890	
421,320		Magneto-electric		
421,339 431,340		Alarms, burglar ————————————————————————————————————		
421,371		Telephones, calls		
421,394	Foley, J. S	Telegraphy, railway car	Feb. 18, 1890	
421,396	Frei, G. A	Cut-outs, thermal	Feb. 18, 1890	
421,398 421,439		Annunciators		
421,449		Valve-controllers		
421,457	Wadleigh, M	Medical and surgical, body-wear	Feb. 18, 1890	
421,464	Wirt, H. C	Locomotion	Feb. 18, 1890	
421,469 421,479	Brace De W B	Lights, filaments and carbons Magneto-electric	Feb. 18, 1890	
421,484		Photography, cameras		
421,498	Hubinger, J. C	Heaters	Feb. 18, 1890	
421,499	Hubinger, J. C	do	Feb. 18, 1890	
421,508 $421,530$	Straight G H	Annunciatorsdo	Feb. 18, 1890	
421,535	Wheeler, F	Locomotion	Feb. 18, 1890	
421,567	Grah, W., jr	Magnetic locks and bolts	Feb. 18, 1890	
421,586 $421,594$	Kookogey, W. P	Lights, sockets and keys	Feb. 18, 1890	
421,630	Stewart J	Mining machinesLights, sockets and keys	Feb. 18, 1890	
421,636	Titus, É. C.	Telephones, switches	Feb. 18, 1890	

No.	Name.	Class.	DATE.
421,666	Carpenter, H. H	Batteries, seeondary	Feb. 18, 1890
421,677	Cunningham, J. H	Locomotion	Feb. 18, 1890
421,733	Liedke, E. L	Lights, filaments and earbons	Feb. 18, 1890
421,781 $421,790$	Stoughton, J. A	Motors	Feb. 18, 1890 Feb. 18, 1890
421,790	Walter, W. C	Railway signals	
421,800	Whitney, R. W. and Cowles, B. K	Telephones, details	Feb. 18, 1890
421,801	Willms, C. and Leibig, G. A., jr	Batteries, galvanie	Feb. 18, 1890
421,802	Wollensak, J. F.	Connectors	Feb. 18, 1890
421,819 421,851	Davy, J. W	Indicators	
421,852	Bulen, G. F	Thermostats	
421,853	Bulen, G. F	Telegraphy, fire	Feb. 18, 1890
421,854	Buleu, G. F	do	Feb. 18, 1890
421,864	Layng, W. HSeiler, P	Lights, incandescent, special features Telegraphy, fire	Feb. 18, 1890
421,882 421,887	Adair, J	Loeomotion	Feb. 25, 1890
421,911	Diehl, P	Motors	Feb. 25, 1890
421,916	Entz, J. B. and Phillips, W. A	Batteries, secondary	
421,967	Pfatischer, M.	Magneto-electrie	
421,968 421,983	Phillips, É. F Souders, M. M	ConductorsRailway signals	Feb. 25, 1890
421,988	McIntire, C	Connectors	Feb. 25, 1890
422,072	Edisou, T. A	Telegraphy, duplex	Feb. 25, 1890
422,073	Edison, T. A	Telegraphy, circuits and systems	
422,074	Edison, T. A Ladd, H. W	Telegraphy, duplex Telephones, mechanical	Feb. 25, 1890
422,082 422,096	Short, S. H		Feb. 25, 1890
422,107	Aver. C. H	Medical and surgical, body-wear	
422,147	Parker, W. E. and Temple, H. E	Cut-outs, mechanical	Feb. 25, 1890
422,148	Parkhurst, E. B	Motors	
422,149 422,164	Parkhurst, E. B.	Locomotion	Feb. 25, 1890
422,174	Bartlett, S. H. and Waite, H. E	Telephones, details	Feb. 25, 1890
422,190	Dewer M: W	Heaters	Feb. 25, 1890
422,196	Flora, E. E. and Hoy, P. R	Lights, incandescent, special features	Feb. 25, 1890
422,201	Hollingshood W B	Motors, reciprocating Batteries, secondary	Feb. 25, 1890 Feb. 25, 1890
422,216 422,219	Jacob H. J.	Air and gas pumps, pneumatie	Feb. 25, 1890
422,244	Muckle, M. R., jr., and Smith, T. C	Conductors, underground	Feb. 25, 1890
422,265	Van Depoele, C. J	Magneto-electrie	Feb. 25, 1890
422,266 422,295	Van Depoele, C. J	Locomotion	Feb. 25, 1890 Feb. 25, 1890
422,300	Hartmann, C. J.	Batteries, secondary	Feb. 25, 1890
422,301	Hartmann, C. J	do	Feb. 25, 1890
422,302		Lights, filaments and carbons	
422,308 422,326	Lyte, F. M.	Batteries, secondaryVending apparatus	Feb. 25, 1890
422,339		Locomotion	
422,854	Rae, F. B	Telegraphy, lightning arresters	Feb. 25, 1890
422,360	Wollin, W. F. and Werline, E. H	Lights, sockets and keys	Feb. 25, 1890
422,419 422,438	Penneck G B	Magneto-electricBatteries, secondary, applications	Mar. 4, 1890
422,445		Locontotion	
422,446	Pyle, G. C	Lights, arc, positive feed, gear-clutch	Mar. 4, 1890
422,456 $422,457$	Smith, W. F	Lights, filaments and carbons Batteries, seeondary	Mar. 4, 1890
422,500		Electrolysis, chemicals	
422,504	Currie, S. C. C	Batteries, seeondary	Mar. 4, 1890
422,505	Currie, S. C. C	do	Mar. 4, 1890
422,511		Magneto-electric	
422,512 422,524		Cut-outs, electro-magnetie	
422,533	Kookogey, W. P	Batteries, secondary	Mar. 4, 1890
422,534	Linville, J. H	Batteries, galvanic.	Mar. 4, 1890
422,550	Thomson, E	Magneto-electric	Mar. 4, 1890
$\begin{array}{c} 422,556 \\ 422,577 \end{array}$	Edison T A and Gilliland E T	Anti-induction devices	Mar. 4, 1890
422,578	Edison, T. A	Telephones, relays and repeaters	Mar. 4, 1890
422,579	Edison, T. A	do	Mar. 4, 1890
422,591	Hayden, W. W. and Diekeman, C. S.	Drop-lights and hangers	Mar. 4, 1890
422,592 422,604	Mahnken H	Lamp shades Telegraphy, printing	Mar. 4, 1890
422,614	Nolan, E. J	Type-writing	Mar. 4, 1890
422,616	Olney, W. D	Horology, watch balances	Mar. 4, 1890
422,634	Short S H	Lights, sockets and keys	Mar. 4, 1890
422,645	Short, S. H	Locomotion	Mar. 4, 1

No.	Name.	CLASS.	Date.
422,651	Stanley, G. E.	Insulators	Mar. 4, 1890
422,654	Suren, N. H	Annunciators	
422,672	Waring, J	Galvanometers	
422,681	Wray, J. C.	Magneto-electric	
422,705	Berrenberg, A. and Umbehend, J	Cut-outs, mechanical	
422,722	Carpenter, H. L.	Telephones, calls	
422,730 422,732	Conkling, G	HeatersSeparators	
422,746	Von Dolivo-Dobrowolsky, M	Inductoriums, transformers, rotary	
422,755	De Ferranti, S. Z.	Motors, alternating	
422,765	Gould, C. C	Telephones, systems	Mar. 4, 1890
422,773	Hamilton, C. J	Annunciators	20 1 12
422,802	Kennedy, J. C.	Inhalers and respirators	Mar. 4, 1890
422,803	Kildoyle, E. E.	Alarms	Mar. 4, 1890
422,811	Lemaire, P. C. J		
422,855	Van Depoele, C. J	Transmission of power	Mar. 4, 1890
422,856	Van Depoele, C. J	do	
422,857 422,858	Van Depoele, C. J	do	Mar. 4, 1890 Mar. 4, 1890
422,859	Van Depoele, C. J	do	Mar. 4, 1890
422,860	Van Depoele, C. J	do	
422,862	Washburn, G. A		
422,863	Washburn, G. A	Magneto-electric	Mar. 4, 1890
422,876	Bower, J. F	Spring scales	Mar. 4, 1890
422,885	Hoyt, A. H	Induction coils	Mar. 4, 1890
422,895	Smith, W. F	Lights, filaments and carbons	Mar. 4, 1890
422,910	Brown, H. P	Lighting, systems	
422,911 422,925	Butterfield, H. R	Motors	Mar. 11, 1890 Mar. 11, 1890
422,929	Kilbourn, W. H	Applications, tools and machines	
422,948 422,956	Malmborg, E. R	Valve-controllers	Mar. 11, 1890
422,968	Paine, W. J.	Applications, tools and machines	Mar. 11, 1890
422,975	Rice, E. W., jr	Regulators	
422,976	Roberts, H. P.	Locomotion	Mar. 11, 1890
422,981	Shafer, B. F	Annunciators	
422,999	Thomson, E. and Rohrer, A. L.	Magneto-electric	
423,004	Vogler, W	Locomotion	Mar. 11, 1890
423,005	Vogler, W	Polls	Mar. 11, 1890
423,014 423,023	Bruner, A.	Conductors, underground	Mar. 11, 1890 Mar. 11, 1890
423,026	Cohen, R. L	Magneto-electric	Mar. 11, 1890
423,029	Currie, S. C. C	Regulators	Mar. 11, 1890
423,091	Sorley, C	Batterics, secondary	Mar. 11, 1890
423,101	Winslow, W. H.	Coating with metal	Mar. 11, 1890
423,102	Wood, J. J.	Cut-outs, thermal	Mar. 11, 1890
423,134	Cope, T. J	Conductors, underground	Mar. 11, 1890
423,207	Baner, A. H		
423,210	Blathy, O. T		
423,223 423,229	Emery, S. S	Heaters	Mar. 11, 1890 Mar. 11, 1890
423,229 423,245	Hart, A. W	Applications, tools and machines	Mar. 11, 1890
423,286	Smith, W. C	Telegraphy, fire, alarms and extinguishers	Mar. 11, 1890
423,299	Wolf, J. J	Telcphones, details	
423,309	Chamberlain, J. C.	Magneto-electric	Mar. 11, 1890
423,310	Chamberlain, R. N. and J. C	Batteries, secondary	
423,317	Heald, A		
423,324 423,335	Johnson, W. A. and Smith, J. N.		
423,335	Moorthamers, L		
423,361	Wallace, J. S	Applications, general	
423,385	Miesse, A		
423,391	Rae, F. B		
423,400	Voss, D. C		Mar. 11, 1890
423,405	Barton, S	Ships, submarine and torpedo	Mar. 11, 1890
423,421		Heaters	
423,449		Conductors	
423,462		Motors	
423,468 423,487		Locomotion Telegraphy, fire	
423,488		Cut-outs, mechanical	
423,494	Scribner, C. E	Annunciators	Mar. 18, 1890
423,495	Seymonr, H. A	Locomotion	Mar. 18, 1890
423,527	Miller, G. E	do	Mar. 18, 1890
423,549	Brunning, C. E	Medical and surgical, body-wear	Mar. 18, 1890
	Gutmann, L	Locomotion	Mar. 18, 1890

No.	Name.	Class.	DATE.
423,594	Clark, M. M	Batteries, galvanie	Mar. 18, 1890
423,600		Galvanometers	
423,616 423,617	Manker, C. W. and G. F.	Induction coils	Mar. 18, 1890 Mar. 18, 1890
423,632	Rothenberg, W. F	Bridges, towers	Mar. 18, 1890
423,637	Seribner, C. E	Lights, are, special features	Mar. 18, 1890
423,638	Scribner, C. E	Cut-outs, electro-magnetic	Mar. 18, 1890
423,654 423,680	Fuller I A	Applications, general	Mar. 18, 1890
423,697	Pinolet, L. M	Bells	Mar. 18, 1890
423,707	Stanley, A. F.	do	Mar. 18, 1890
423,708	Tirmann, H	Friction generators	Mar. 18, 1890
423,732 423,733	Coffin, C. L	Heatersdo	Mar. 18, 1890
423,734	Coffin C. L.	do	Mar. 18, 1890 Mar. 18, 1890
423,735	Coffin, C. L	do	Mar. 18, 1890
423,736	Coffin, C. L	qo	Mar. 18, 1890
423,753	Gee, W	Alarms, burglar	Mar. 18, 1890
423,788 423,807	Piener H file	Telegraphy, lightning arresters	Mar. 18, 1890
423,873	Pieper, H., fils	do	Mar. 18, 1890
423,874	Lineff, A. L	Loeomotiou	Mar. 18, 1890
423,886	Toulmin, M	Fences, railway gates, electric	Mar. 18, 1890
423,891 11,067	Griswold J. F	Drop-lights and hangers	Mar. 18, 1890
423,897		Regulators	
423,901		Telegraphy, multiplex	
423,902	Brown, R. G.	do	Mar. 25, 1890
423,903	Brown, R. G.	do	
423,907 423,909	Cooley H W	Separators Regulators	Mar. 25, 1890 Mar. 25, 1890
423,912	Diehl. P	Magneto-electrie	Mar. 25, 1890
420,956	Ross, R	Heaters	Mar. 25, 1890
423,959	Schmauser, T.		Mar. 25, 1890
423,965 423,966	Thomson, E		Mar. 25, 1890
423,967	Thomson, E		
423,975	Wightman, M. J	Motors.	
423,991	De Ferranti, S. Z.	Magneto-electric	Mar. 25, 1890
424,006	Davies, C. L.		
424,012 424,036	MacMaster, M. A.——————————————————————————————————		
424,047	Butterfield, H. R. and Mitchell, W	Heaters	
424,057	Gilman, C. C		
424,062	Hazard, R. R.	Railway ears, trueks	Mar. 25, 1890
424,065 424,070	Jenney, C. D	Magneto-electrie Locomotion	Mar. 25, 1890
424,082	Thompson, W	do	Mar. 25, 1890
424,110	Harris, S.	do	Mar. 25, 1890
424,152		Batteries, seeondary	Mar. 25, 1890
424,182 424,206	Dempf, J. A.	Telegraphy, circuit-elosers	Mar. 25, 1890
424,200		Loeomotiondo	
424,209	Jones, F. W	Telegraphy, quadruplex	Mar. 25, 1890
424,219	Reed, W. G	Telegraphy, eircuit-closers	Mar. 25, 1890
424,229 424,268	Carr R R	Cut-outs, thermal	Mar. 25, 1890
424,273	Colby, E. A. and Strong, J. C.	Time checksClocks, electric	Mar. 25, 1890
424,295	Kaslan, J. P.	Knitting and netting, stopping	Mar. 25, 1890
424,298	Henry, J. C	Locomotion	Mar. 25, 1890
424,310	McKinney W	Telephones, systems	Mar. 25, 1890
424,338 424,339	MeLaughlin, J. F	MetersBatteries, secondary, applications	Mar. 25, 1890
424,340	McLaughlin, J. F	Locomotion	Mar. 25, 1890
424,363	Singer, W. F	Thermostats	Mar. 25, 1890
424,364	Slentz, E. P. and McGrew, J. B.	Loeomotion	Mar. 25, 1890
424,371 $424,372$	Stephenson, J	Street ears, steamdo	Mar. 25, 1890
424,373	Stephenson, J.	do	Mar. 25, 1890
424,374	Stephenson, J.	Loeomotion	Mar. 25, 1890
424,380	Vau Depoele, C. J	do	Mar. 25, 1890
424,381 424,387	Watson N M	Alarms, burglar	Mar. 25, 1890
424,401	Bagby, W. J.	Meters	Mar. 25, 1890
424,403	Butterfield, H. R.	Meters Heaters	Mar. 25, 1890
424,404 424,406	Butterfield, H. R. and Mitchell, W	do	Mar. 25, 1890
	I PUDO W H II	ALD COURSE OF CLOCKERS	

No.	NAME.	CLASS.	Date.
424,431	Pearce, F	Telegraphy, fire	Mar. 25, 1890
424,436	Sprague, F. J	Locomotion	Mar. 25, 1890
424,441		Heaters	
424,442		Projectiles	
424,535		Motors	
424,544		Fog signals	
424,562	Loomis, O. P		
424,563	Loomis, O, P		Apr. 1, 1890
424,575 424,595	Reed, T. S. Bergmann, S. and Scott, G. B.		
424,606	Gutmann, L		Apr. 1, 1890
424,607	Hunter, R. M	Locomotion	Apr. 1, 1890
424,635	Wood, F. B.		
424,665	Young, C. G		
424,695	Van Depoele, C. J.	Locomotion	
424,699	Bentley, E. M.	do	
424,703	Clarke, G. D	Electro-magnets	Apr. 1, 1890
424,725	Porter, M. D.	Annunciators	
424,726	Porter, M. D.	do	
424,729	Scherer, F	Applications, general	
424,734	Smith, L. T	Motors, alternating	
424,739	Van Nuis, C. S	Cut-outs, mechanical	
424,743	Weinberg, S. S.	Telegraphy, fire, alarms and extinguishers	
424,751 424,752	Barrett, J. A.——————————————————————————————————	Conductors Lights, arc, positive feed	
424,761			
424,786	Conroy, J. C	Valve-controllers Medical and surgical, body-wear	
424,809	McLaughlin, J. F.	Batteries, secondary	
424,810	McLaughlin, J. F.	Locomotion	
424.817	Patton, W. H	do	
424,818	Perret, F. A	do	
424,827	Shelton, W. J		
424,845	Bentley, E. M.		
424,848	Blackwell, F. O	do	Apr. 1, 1890
424,860	Cox, C. A. and J. F.		Apr. 1, 1890
424,866	Dulait, J.		Apr. 1, 1890
424,887	Knight, W. H		Apr. 1, 1890
424,888	Knight, W. H	do	Apr. 1, 1890
424,891	Lowrie, W., Hall, C. J. and Kollé, H. W	Meters	, 1
424,910	Van Depoele, C. J		Apr. 1, 1890
424,911	Van Depoele, C. J.		Apr. 1, 1890
424,921 424,922	Capek, J. V	Heatersdo	
424,928	Hunter, R. M		Apr. 1, 1890 Apr. 1, 1890
424,929	Lindenan E W	Clocks, electric	Apr. 1, 1890
424,935	Reid, E. S.	Conductors, underground	Apr. 1, 1890
11,068	Regan, D. S.	Air and gas engines, explosive	
424,993	McCluer, C. E		
424,995	Owen, E. A.		
424,997	Prest, J. E		
425,004	Schnitz, R	Time-alarms	Apr. 8, 1890
425,038	Maynadier, J. E	Locomotion	Apr. 8, 1890
425,058	Warner, E. P.	Telephones, switches	Apr. 8, 1890
425,061	Bishop, J. D.		
425,066	Etheridge, H	Telegraphy, automatic	
425,068 425,069	Garver, M. M.	Galvanometers	
425,009 $425,071$	Garver, M. M. Greene, L. R.		
425,076	Hunter, R. M.	Bridges, girders and columns Locomotion	Apr. 8, 1890
425,077	Hunter, R. M	Locomotiondo	
425,078	Hynes, M	Annunciators	
425,086	Robertson, J. H.	Telephones, systems	
425,089	Singer, W. F	Telegraphy, fire, alarms and extinguishers	
425,101	Kilian, C. J	Locomotion	
425,106	Nichols, E. I	Motors	Apr. 8, 1890
425,107	Penney, H. E	Locomotion	
425,125	Douglass, A.		
425,135	Kookogey, W. P		
425,143	Moran, J		
425,161	Cassard, H. L.	Telephones, systems	
425,164	Coffin, C. L		
425,202 $425,205$	Blanchard, S. W		
425,269	Bush, A. R. Thompson, M. E.		
	Thompson, M. E		
	Thompson M F.	do	Amr. 8 1890
425,270 425,335	Thompson, M. E.——————————————————————————————————		

No.	Name.	CLASS.	DATE.
425,388	Odell, J. B	Locomotion	Apr. 8, 1890
425,413	Etheridge, H	Telegraphy, automatic	Apr. 15, 1890
425,435	LaRoche, F. A	Magneto-electric	Apr. 15, 1890
425,466	Stevens, W. F.	Telegraphy, railway-car	Apr. 15, 1890
425,470	Thomson, E	Systems of distribution	Apr. 15, 1890
425,488	Blackwell, F. O	Locomotiondodo	
425,489 425,493	Blackwell, F. O	do	
425,507	Hamilton, C.J.	Cut-outs, mechanical	
425,511	Jones, F. W	Telegraphy, keys	
425,513	Kookogey, W. P	Insulators	
425,568	Edelkamp, J	Batteries, thermal	
425,570	Griggs, A. C.	Alarms	
425,572 $425,576$	Hof heimer, M	Apparel, eutting Telegraphy, fire	Apr. 15, 1890
425,579	Popp, V	Meters	
425,588	Thomson, E. and Riee, E. W., jr	Lights, soekets and keys	
425,594	Currier, J. B	Telephones, calls	Apr. 15, 1890
425,597	Delany, P. B	Telegraphy, relays and sounders	
425,615	Knudson, A. A.	Insulating materials	
$\begin{array}{c} 425,625 \\ 425,627 \end{array}$	Parker, É. A	Thermostats Locomotion	
425,630	Rice, D. H	Telephones, calls	
425,631	Rice, D. H	do	Apr. 15, 1890
425,640	Thomson, E.	Locomotion	Apr. 15, 1890
425,694	Porter, W. and George, H.	do	Apr. 15, 1890
425,720	Wheeler, F. C	do	
$\begin{array}{c} 425,726 \\ 425,741 \end{array}$	Batchelor, C.	Cut-outs, electro-magnetic	
425,741 $425,757$	Dewey M W	Lights, sockets and keys————————————————————————————————————	Apr. 15, 1890 Apr. 15, 1890
425,760	Edison, T. A		Apr. 15, 1890
425,761	Edison, T. A.	Lights, incandescent	Apr. 15, 1890
425,762	Edison, T. A.	Cut-outs, thermal	Apr. 15, 1890
425,763	Edison, T. A	Magneto-electric	
425,767 425,768	Evans, T. A	Locomotion Dishes and plates	
425,777	Godfrey W L	Magnetic locks and bolts	Apr. 15, 1890 Apr. 15, 1890
425,801	Johnson, F	Lighting, systems	Apr. 15, 1890
425,818	MeLaughlin, J. F.	Batteries, secondary	Apr. 15, 1890
425,819	McLaughlin, J. F	do	Apr. 15, 1890
425,853	Berne, A. W.	Telephones, systems	Apr. 15, 1890
425,862 $425,863$		do	Apr. 15, 1890
425,866	Dower M W	Locoluotion	Apr. 15, 1890 Apr. 15, 1890
425,883		do	Apr. 15, 1890
425,902	Philippart, G	Batteries, secondary	Apr. 15, 1890
425,903	Porter, W. H	Incrustation	Apr. 15, 1890
425,911		Loeomotion	Apr. 15, 1890
425,912 425,913		do	
425,917	Tortora E	Conductors, underground	Apr. 15, 1890
425,923	Zipernowsky, C., Déri, M. and Bláthy, O. T	Motors, alternating	Apr. 15, 1890
425,929	Bruckner, C. C. and Baleck, S. W	Engraving	Apr. 15, 1890
425,950	Knight, W. H	Loeomotion	Apr. 15, 1890
425,957	Philippart, G.	Batteries, secondary	Apr. 15, 1890
$425,959 \\ 425,961$	Seubel P	Batteries, galvanic Conductors, underground	Apr. 15, 1890
425,963		Telephones, switches	
425,964	Weems, D. G	Locomotion	Apr. 15, 1890
425,965	Weems, D. G	Railways, rails	Apr. 15, 1890
425,966	Weems, D. G	Loeomotion	Apr. 15, 1890
425,990	Davis, F. E. and Scott, J., jr	Covering eord	Apr. 22, 1890
425,991 425,995	Diehl P	Motorsdo	Apr. 22, 1890
425,999	Epstein, L	Batteries, secondary	Apr. 22, 1890
426,009	Hadlock, W. E	Indicators	Apr. 22, 1890
426,024	Von der Kammer, J	Cut-outs, thermal	Apr. 22, 1890
426,049	Norton, J. P	Cut-outs, mechanical	Apr. 22, 1890
426,055	Patterson T	Lights, incandescent	Apr. 22, 1890
426,057 426,064	Rae F. B	Cut-outs, thermal Locomotion	Apr. 22, 1890
426,065	Rae, F. B	Galvanometers.	Apr. 22, 1890
426,066	Rae, F. B	Locomotion	Apr. 22, 1890
426,082	Thomson, E	Cut-outs, thermal	Apr. 22, 1890
426,102	Blackwell, F. O	Locomotion	Apr. 22, 1890
426,108	Clark E. P	Regulators	Apr. 22, 1890
426,109	ORIES, E. I	do	Apr. 22, 1890

No.	Name.	Class.	DATE.
426,110	Clark, E, P	Regulators	Apr. 22, 1890
426,121	Gennert, E. F	Lights, incandescent, special features	Apr. 22, 1890
426,127	Kintner, C. J.	Systems of distribution	Apr. 22, 1890
426,134 426,153	Wagawann E	AnnunciatorsInductoriums, transformers, stationary	Apr. 22, 1890
426,155	Warner, E. P.	Street lamps	Apr. 22, 1890
426,156	Warrell, F. G	Cut outs, thermal	Apr. 22, 1890
426,189	Klein, P. H., jr	Lights, incandescent, special features	Apr. 22, 1890
426,196		Conductors, underground	
426,197 426,198	Munsie J F	do	Apr. 22, 1890
426,199		do	
426,200	Munsie, J. F	Connectors	Apr. 22, 1890
426,201	Munsie, J. F	Conductors, underground	Apr. 22, 1890
426,202 426,203		Insulating materials	
426,204	Munsie, J. F		
426,205	Munsie, J. F		
426,206	Munsie, J. F	do	Apr. 22, 1890
426,222	Tower, G. A	Railway signals	Apr. 22, 1890
426,247 426,266		Telegraphy, relays and sounders	
426,269		Locomotion	
426,304	McMahon, J. P.	Telegraphy, fire, alarms and extinguishers	Apr. 22, 1890
426,307		Annunciators	Apr. 22, 1890
426,335 426,338	Shallenberger, O. B	Meters Telegraphy, lightning arresters	Apr. 22, 1890 Apr. 22, 1890
426,343		Magneto-electric	Apr. 22, 1890
426,348		do	Apr. 22, 1890
426,379	Henry, J. C	Locomotion	Apr. 22, 1890
426,380		Motors	Apr. 22, 1890
426,381 426,382	Hunter R M	lgniting devices, manual Locomotion	Apr. 22, 1890 Apr. 22, 1890
426,384	Jasper, W	Velocipedes	Apr. 22, 1890
426,395	Rudd, C. H	Railway signals	Apr. 22, 1890
426,405	Wood, J. J	Lights, are, gravity feed, gear-clutch	Apr. 22, 1890
426,436		Locomotion	Apr. 29, 1890
426,437 426,452		Heaters Locomotion	Apr. 29, 1890 Apr. 29, 1890
426,471		Magneto-electric	Apr. 29, 1890
426,479	Tremaine, H. A.	Lights, filaments and earbons	Apr. 29, 1890
426,499		Galvanometers	Apr. 29, 1890
426,522 426,554		Telegraphy, railway-car	Apr. 29, 1890 Apr. 29, 1890
426,555		Recorders Morse registers	
426,563	Frankenberg, A. M.	Induction coils	Apr. 29, 1890
426,570	Peel, W. T	Regulators	Apr. 29, 1890
426,573	Stanley, W., jr	do	
426,574 426,576		Magneto-electric	Apr. 29, 1890
426,580		Locomotion	
426,583	Davis, M. M.	Telegraphy, circuits and systems	Apr. 29, 1890
426,591	Jones, F. W	Telegraphy, quadruplex	Apr. 29, 1890
426,621 426,650	Thomason P. W.	Telegraphy, fire	Apr. 29, 1890
426,657		Locomotion	
426,658		do	
426,660	Carroll, W	Lamp posts	Apr. 29, 1890
426,688		Telegraphy, fire, alarms and extinguishers	
426,691 426,699	Wood I I	Telegraphy, fire	Apr. 29, 1890
426,705	Bleakley, W. M	Regulators	
426,706	Bleoo, J. H	do	
426,708	Brill, J. A	Locomotion	Apr. 29, 1890
426,724		Batteries, secondary	Apr. 29, 1890
426,749 426,778	Anderson, F	Telegraphy, automatic Drop-lights and hangers	Apr. 29, 1890 Apr. 29, 1890
426,781	Dewey, M. W	Heaters	Apr. 29, 1890
426,788	Farmer, M. G.	Electro-deposition	Apr. 29, 1890
426,789	Farmer, M. G.	do	
426,819 426,832	Jones, F. W	Telegraphy, quadruplex	Apr. 29, 1890 Apr. 29, 1890
426,832	Madden, J Chambers, W. H	Telegraphy, fire, alarms and extinguishers	Apr. 29, 1890 Apr. 29, 1890
426,932	Gendron, F	Batteries, galvanic	Apr. 29, 1890
	Gendron, F	Batteries, galvanic Telegraphy, keys Projectiles, blasting and fuses	Apr. 29, 1890

No.	NAME.	Class,	Date.
426,992	Garver, M. M	Galvanometers	Apr. 29, 1890
427,014	Roberts, E. F	Indicators	Apr. 29, 1890
427,022		Galvanometers	
427,024	Whitaker, H. B.	Cnt-onts, mechanical	Apr. 29, 1890
427,032	Bain, F	Rheostats	May 6, 1890
427,039	Brooks, D., Jr	Conductors, anderground	May 6, 1890
427,042 427,062	Frielman F F	Telegraphy, railway-carLights, incandescent, special features	May 6, 1890 May 6, 1890
427,002	Gibbs W E	Dental instruments	May 6, 1890
427,087		Telephones, systems	
427,120	Scribner, C. E	do	May 6, 1890
427,121		do	
427,122	Scribner, C. E	Magneto-electric, hand-machines	May 6, 1890
427,123		Telephones, systems	
427,138		Connectors	
427,151	Burton, G. D	Heaters	May 6, 1890
427,154	Carty, J. J	Telephones, systems	May 6, 1890
$\frac{427,155}{427,156}$		do	
427,163	Elkine W H	Regulators	May 6, 1890
427,164		tegmatorsdo	
427,194		Telephones, systems	
427,195	Seymour, A. P.	Lights, arc, special features	May 6, 1890
427,204	Stut, J. C. H	Telephones, electric	May 6, 1890
427,208	Waters, B. E	Telephones, systems	May 6, 1890
427,221	Boynton, E. M.	Locomotion	May 6, 1890
427,235	Ingraham, A. A.	Motors.	May 6, 1890
427,237	Kassell, A. S	Cut-outs, electro-magnetic Magneto-electric	May 6, 1890
427,259 $427,294$	Proce Do W P	Magneto-electric	May 6, 1890 May 6, 1890
427,296	Rushy J. F	Insulators	May 6, 1890
427,333		Locomotion	
427,341	Mcyers, H. J	Magnetic locks and bolts	May 6, 1890
427,387	Winton, H. D	Railway signals	May 6, 1890
427,405	Dewcy, M	Magneto-electric	May 6, 1890
427,429	Koyle, C. H. and Lattig, J. W	Railway signals	May 6, 1890
427,430		do	
427,445	Sprague, G	Conductors, nnderground	May 6, 1890
427,459 427,468		Medical and equipped hadra ways	
427,480	Paine A T	Medical and surgical, body-wearNautical signals	May 6, 1890 May 6, 1890
427,489	Westinghouse G. ir	Meters	May 6, 1890
427,503		Motors	
427,513	Hollingshead, W. B	Electro-deposition	May 6, 1890
427,514	Holmes, A. B. and Gale, G. F	Lights, sockets and keys	May 6, 1890
427,515		Systems of distribution	
427,521		Cut-onts, mechanical	
427,522		do	
427,523	Warner E P	Paralleta 2	May 6, 1890
427,530 427,540	Rell. L.	Regulators	May 6, 1890 May 13 1890
427,541	Bell, L	Raitways, systems, circuits, multiple are	May 13, 1890
427,548	Brush, C. F	Cnt-outs, thermal	May 13, 1890
427,549	Burton, J. M	Applications, tools and machines	May 13, 1890
427,569	Harriman, W. F	Locomotion	May 13, 1890
427,571	Heymann, E. and F. W.	Regulators, alternating	May 13, 1890
427,574		Heaters	
427,589 427,606		Locomotion	
427,621	Scribner C E	Electro-magnets Telephones, systems	May 13, 1890
427,622	Scribner, C. E	Telephones, switch-boards	May 13, 1890
427,623	Scribner, C. E	Telephones, systems	May 13, 1890
427,624	Scribner, C. E	do	May 13, 1890
427,628	Short, S. H	Railways, systems, overhead, trolleys	May 13, 1890
427,674	Daft, L	Magneto-electric	May 13, 1890
427,680	Goodson, G. A	Type-writing	May 13, 1890
427,681	Smith W F	Printing, matrix-making	May 13, 1890
427,710 $427,711$	Spike C. J. and McLood H. V.	Batteries, secondary	May 13, 1890
427,724	Bentley, E. M.	Telegraphy, fire	May 13, 1890 May 13, 1890
427,725	Bentley, E. M	Locomotion	May 13, 1896
427,726	Bentley, E. M	do	May 13, 1890
427,742	Carty, J. J	Telephones, systems	May 13, 1890
	Cordley W J	Railways, systems, closed conduit	May 13, 1890
427,746		real ways, systems, closed conduit	may 10, 1000
427,746 427,748 427,749	Currie, S. C. C	Metersdo	May 13, 1890

No.	Name.	CLASS.	Date.
	= = =		
427,762	Haas, J., jr	Rāilway signals	May 13, 1890
427,783 427,785		Batteries, secondary	May 13, 1890 May 13, 1890
427,789	Nevins, T. F	do	May 13, 1890
427,823	Anthony, W. A.	Cut-outs, thermal	May 13, 1890
427,873	Jones, J. W	Alarms	May 13, 1890
427,876	Kaylor, J. S.		May 13, 1890
427,878 427,879		Conductor supports and insulators Annunciators	May 13, 1890 May 13, 1890
427,917	Scribner, C. E	Telephones, systems	May 13, 1890
427,928	Stellman, J. L	Steam boilers, coverings	May 13, 1890
427,951	Atterbury, T. B	Lamp-shades	May 13, 1890
427,953 427,966	De Baillehache, E. J. J.	Railway signals Railway cars, trucks	May 13, 1890
427,900		Heaters	May 13, 1890 May 13, 1890
427,974		Telephones, systems	May 13, 1890
427,978	Von Dolivo-Dobrowolsky, M	Motors, alternating	May 13, 1890
427,984		Telegraphy, lightning arresters	May 13, 1890
427,986 428,008	Lange P	Street lamps	May 13, 1890
428,008	Taylor, F. C. and Hurd, J. R.	Lights, arc, gravity feed, gear-clutch	May 13, 1890 May 13, 1890
428,030		Fire-arms, ball traps	May 13, 1890
428,038	Bowen, E. H	Magneto-electric	May 13, 1890
428,041	Conly, M. S	Railway signals	May 13, 1890
428,042	Conly, M. S	Applications, general	May 13, 1890
$\frac{428,046}{428,050}$		Connectors Lighting, systems	May 13, 1890 May 13, 1890
428,055	Patterson, W. R		May 13, 1890
428.057	Tesla, N	Pyro-magneto electric devices	May 13, 1890
428,066	Breese, C. P		May 20, 1890
428,071	Brown, H. P		May 20, 1890
428,072 428,073	Brown, H. P Brown, L. V	Magneto-electric	
428,075	Church, B. S		
428,084		Meters	May 20, 1890
428,087	Garrett, D		
428,095	Hart, O. W		
428,098 428,116		Locomotion Batteries, galvanic	
428,123	Morrison, D. B		May 20, 1890
428,136	Rae, F. B	Locomotion	May 20, 1890
428,145	Ruttan, H. W		May 20, 1890
428,169	Knight, W. H		May 20, 1890
428,174 $428,175$	Ludwig, J. C.	Telephones, magnetic	May 20, 1890 May 20, 1890
428,189	Warner, E. P	Telephones, systems	May 20, 1890
428,201	Davis, F. E. and Scott, J.	Covering cord	May 20, 1890
428,210	Hunter, R. M		May 20, 1890
428,211 428,221	Hunter, R. M	Telegraphy, multiplex	May 20, 1890 May 20, 1890
428,222	Patten, F. J	do :	May 20, 1890
428,223	Patten, F. J	do	May 20, 1890
428,224	Patten, F. J	do	May 20, 1890
428,225	Patten, F. J		
428,226 428,247	Patten, F. J Fenner, W. W		May 20, 1890
423,256	Schneider, J		
428,280	Mehren, J. F.	Meters	May 20, 1890
428,289	Schmid, A	Magneto-electric	May 20, 1890
428,290	Von Siemens, E. W		
428,317 $428,358$	Pfannkuche, GStevens, N. P		
428,378	Colby, E. A		
428,379	Colby, E. A		May 20, 189
428,380	Croasdale, E	Magneto-electric	May 20, 1890
428,420 428,427	Story, R. J. and J. T., Fox, A. E. and Hill, G. J.		May 20, 1890
428,433	Walton, R. T		
428,435	Westinghouse, G., jr.		
428,443	Ashbaugh, J. I	Heaters	May 20, 1890
428,454	Chapman, W. H	Motors	May 20, 1890
428,459	Coffin, C. L		
423,481 428,482	Groswith, H Guss, O. G		
428,499	Legg, J. B. and Nile, J		
428,540	Williams, R. E	Medical and surgical, body-wear	May 20, 1890
428,545	Andrews, E	Insulators	May 20, 1890

No.	NAME.	CLASS.	Date.
428,552	Colby, E. A	Reducing and separating	May 20, 1890
428,562	Houck, T. J		May 20, 1890
428,564	Jenks, W. J	Cut-outs, thermal	May 20, 1890
428,574 428,575	Stanley, W., jr	Inductoriums, transformers, stationary	May 20, 1890 May 20, 1890
428,576	Stitzel, F. and Weinedel C	Antomatic signal-setting apparatus	May 20, 1890
428,583	Egan, C. E. and Gray, H. F	Time checks	
428,586	Alton, G. H	Cut-outs, mechanical	May 27, 1890
428,604	Heisler, C		May 27, 1890
428,616	Lemp, H		
428,617	Lemp, H		May 27, 1890
428,618 428,619	Lemp, H	,	May 27, 1890 May 27, 1890
428,620	Lemp, H. and Moody, N. S		May 27, 1890
428,633	Rice, E. W., jr		May 27, 1890
428,647	Thomson, E		May 27, 1890
428,648	Thomson, E		May 27, 1890
428,649	Thomson, E		May 27, 1890
428,650	Thomson, E		
428,651 $428,652$	Thomson, E. and Alton, G. H	Systems of distribution Lights, sockets and keys	May 27, 1890 May 27, 1890
428,653	Thomson, E. and Arton, G. H		
428,669	Dummer, E		
428,676	Karr, H. C.	Clocks, electric	May 27, 1890
428,684	Mason, J. H	Batteries, galvanie	May 27, 1890
428,688	Morehead, J.		
428,698	Scribner, C. E		May 27, 1890
428,704 $428,705$	Thomson, E		
428,723	Jeffers, C. L		
428,732	Sprague, F. J		
428,735	Weller, F. A	Magneto-electrie	
428,742	Brush, C. F		
428,743		do	
428,745	Candee, W. L		
428,746 428,748	Colgate, A. E.	Galvanometers Railway signals	
428,750	Glass, L. and Arnold, W. S		
428,751	Glass, L. and Arnold, W. S.		
428,770	Field, C. H	Engraving machines	May 27, 1890
428,772	Goldschmidt, P		May 27, 1890
428,774	Hayward, E. and Sims, E. S.		
428,781	Potter, S. M. and Morgan, H. E.	Batteries, galvanic	
428,782 428,810	Garsed, R. P		
428,828	Cassard, H. L		
428,854	McCuskey, J. L		
428,888	Burt, E. M.		
428,900	Ehrlich, L		
428,917	Ingraham, A. A.		
428,929	Morris, E. P		
428,930 428,934		Conductors, supports and insulators	
428,935	McLaughlin, J. F	Cut-outs, electro-magnetie	May 27, 1890
428,942	Pawlowski, J	Lights, are, special features	. May 27, 1890
428,970	Stitzel, F	Railway signals	May 27, 1890
428,979	Watson, G. B	Insulators	May 27, 1890
428,989	Wilson, W. H	Lamp shades	May 27, 1890
429,012 429,030		Applications, tools and machines	
429,030		Applications, general	
429,049	McLanghlin, J. F	Metal working, miscellaneous	May 27, 1890
429,058	Pierce, H. I	Conductors, supports and insulators	May 27, 1890
429,067	Simmons, C. H	- Bridges, girders and columns	. May 27, 1890
429,068	Sommerville, A. R	Electrodes	. May 27, 1890
429,074	Webb, F. W and Thompson, A. M.	Railway signals	May 27, 1890
429,093 429,094	Hunter R M	Railways, systems, overhead	May 27, 1890
429,094	Witthaus, E. L	Conductors, underground	May 27, 1890
429,107	Allen, R. N	Electric locomotives	June 3, 1890
429,109		Motors, alternating	
429,113	Brown, B. F.	Railways, systems, overhead, trolleys	June 3, 1890
429,115	Enrry, J	Telegraphy, printing	June 3, 1890
429,129	Ginochio, N. B	- Telephones, magnetie	. June 3, 1890
429,133	Nammeyer, O. E	Cut-outs, thermal Lights, incandescent	June 3, 1890
429,172	Irwin H		

No.	Name.	CLASS.	DATE.	
429,199	Macquesten, W. D	Railways, systems, overhead	June 3, 1890	
429,233	Dickerson, E. N., jr	Telegraphy, multiplex	June 3, 1890	
429,251	Stafford, J	Conductors, underground		
429,255	Bishop, J. D Hering, C	Conductors, lead-covered	June 3, 1890	
429,272 429,273	Hering, C	Batteries, secondary	June 3, 1890 June 3, 1890	
429,274	Hering, C	do		
429,277	Lineff, A. L.			
429,286	Rosenfield, W. W.	Alarms		
429,304 429,305	Cobb, H. B.	Conductorsdo		
429,306	Cobb, H. B.	do	June 3, 1890	
429,307	Cobb, H. B.		June 3, 1890	
429,314	Macquesten, W. D	Electric locomotives		
429,315	Macquesten, W. D	Supports and insulators		
429,316 429,318	Macquesten, W. D Ongley, C. E.	Telegraphy, fire, alarms and extinguishers	June 3, 1890 June 3, 1890	
429,327	Sprague, F. J	Electric locomotives	June 3, 1890	
429,330	Wilkins, T. M. and Reid, A. H.	Voting machines	June 3, 1890	
429,333	Bradford, J. M	Regulators	June 3, 1890	
429,359	McLaughlin, J. F	Type-writing		
429,360 429,377	McLaughlin, J. F English, S. M	Time checks Telegraphy, circuits and systems		
429,386	Parrish, M. W	Electrolysis	June 3, 1890	
429,396	Ward, C. A	Clocks, electric	June 3, 1890	
429,413	Blauvelt, W. S	Railways, systems, overhead, trolleys	June 3, 1890	
429,447	Hoeneman, F. P. and W. A	Batteries, galvanic	June 3, 1890	
429,478 429,483	Ramsey, J., jr., and Weir, F. C	Railway signals	June 3, 1890 June 3, 1890	
429,490	Rudd, C. H	Magneto-electric		
429,534	De Khotinsky, A	Lights, filaments and carbons	June 3, 1890	
429,535	De Khotinsky, A	do	June 3, 1890	
429,559		Heaters	June 3, 1890	
429,560	Carpenter, C. E	do	June 3, 1890	
429,561 $429,562$	Carpenter, C. E.	do	June 3, 1890 June 3, 1890	
429,573	Keller, C. L	Lights, arc, gravity feed, gear-clutch	June 3, 1890	
429,576	McCoy, A. T	Telegraphy, printing	June 3, 1890	
429,577		do		
429,582 429,583		Railway signalsInductoriums, transformers, stationary		
429,584	Possons, N. S.	Cut-outs, thermal	June 3, 1890	
429,594	Bartlett, W. A.	Air and spring guns	June 10, 1890	
429,596	Beattie, J., jr	Batteries, galvanic	June 10, 1890	
429,599	Bishop, J. D	Annunciators	June 10, 1890	
429,608 $429,675$	Dyer, R. N. Burt, M. C.	Lights, incandescentOil gas	June 10, 1890 June 10, 1890	
429,687	Hunter, R. M	Locomotives	June 10, 1890	
429,703	Siliceo, J., jr	Batteries, galvanic	June 10, 1890	
429,705	Steffens, M. J	Photography, cameras	June 10, 1890	
429,727 429,729	Lodge, O. J	Telegraphy, lightning arresters	June 10, 1890	
429,729	Marvin, H. N	Transmission of powerdodo	June 10, 1890 June 10, 1890	
429,731	Marvin, H. N	do	June 10, 1890	
429,732	Marvin, H. N	do	June 10, 1890	
429,735	Patten, F. J	Telegraphy, multiplex	June 10, 1890	
429,736 $429,742$	Pfund, R	Magneto-electric Printing, matrix-making		
429,745	Van Depoele, C. J	Connectors		
429,746	Van Depoele, C. J	Electric locomotives		
429,747	Van Depoele, C. J	Railways, systems, telpher	June 10, 1890	
429,751 $429,787$	Barnard, J. H	Meters		
429,801	Voegel, W	Lights, arc, gravity feed, gear-clutch		
429,815	Reilly, J. C.	Conductors		
429,817	Shubert, H. C	Alarms, burglar	June 10, 1890	
429,825	Wagemann, E	Regulators	June 10, 1890	
429,844	Culver, J. P	Drain tiles	June 10, 1890	
429,887 429,895	Felt, G. H	Galvanometers Batteries, galvanic	June 10, 1890	
429,896	Felt, G. H	do		
429,897	Felt, G. H	do	June 10, 1890	
429,898	Felt, G. H	do	June 10, 1890	
429,899 429,912		Railway signals		
429,912	Hering, C	Batteries, secondary	June 10, 1890	
$\cdot 429,914$	Hering, C	do	June 10, 1890	

No.	NAME.	CLASS.	DATE.
429,981	Van Dancelo C. I	Railways, systems, circuits, multiple arc	June 10, 1890
429,982	Watterhouse, E. R	Telegraphy, keys	
430,010	Flad, H	Conductors, underground	June 10, 1890
430,025	Andersen, J. M	Railways, systems, conduitsCut-outs, mechanical	June 10, 1890 June 10, 1890
430,054 430,058	Ball, C. M. and Norton, S		
430,060	Bentley, E. M	Systems of distribution	Jnne 10, 1890
430,065	Case, J. D. and Evans, C. W.	Music, electric actious	June 10, 1890
430,066 430,075		Batteries, galvanic	
430,076		Railways, systems, circuits, multiple arc	
430,094	Spencer, A. D.	Metal working, tools and implements	June 10, 1890
430,096 11,083	Waddell, MKnight W H	Cut-outs, electro-magnetic Railways, systems, circuits, multiple arc-	June 10, 1890 June 10, 1890
11,084	Knight, W. H	Railways, systems, conduit	June 10, 1890
430,128	Irwin, J. H	Telephones, electric	
430,147 430,156	Pfiugst, L Voelker, W. L		
430,175	Crockett, C. H. and Allen, C. C		
430,208	Huuter, R. M.	Railways, systems, circuits, multiple arc	June 17, 1890
430,252 430,260	Norton, J. A	Cut-outs, mechanicalLights, arc, gravity feed, clutch	
430,263	Beutley, E. M	Railway signals	June 17, 1890
430,275	Edison, T. A	Separators	June 17, 1890
430,279	Edison, T. A	Batteries, galvanic	June 17, 1890
430,280 430,296	Edison, T. A		
430,297	Patterson, W. R	Conductors, underground	June 17, 1890
430,310		Air and gas engines, explosive	
430,312 $430,320$		Magneto-electric, couplings	
430,326	Thomson, E. and Rice, E. W., jr		
430,327	Thomson, E. and Rice, E. W., jr	Regulators	
430,328 430,329	Thomson, E. and Rice, E. W., jr Wightman, M. J	Motors, alternating Railways, systems, multiple arc	June 17, 1890 June 17, 1890
430,357	Thomson, E	Lights, arc, positive feed	June 17, 1890
430,373	Broichgans, S.	Alarms, burglar	June 17, 1890
430,387 430,432	Kennedy, J. C.	Applications, general	June 17, 1890
430,437		Lights, incandescent, special features	
430,453	Willson, T. L.	Electrolysis	June 17, 1890
430,461 $430,462$	Bull, W. B	Incrustationdodo	
430,463	Busenbenz, J. J	Veuding apparatus	
430,485	Rockwell, F. C	Lights, sockets and keys	June 17, 1890
430,486 430,487	Rose, H. J. F	Wash boilers Lamps and gas fittings, candlesticks	
430,504	Barrett, M. M. and Daly, J. F	Air and gas eugines, explosive	June 17, 1890
430,505	Barrett, M. M. and Daly, J. F	do	June 17, 1890
430,506 430,515	Devere D R	Railways, systems, conduit	June 17, 1890
430,551	Wade, G. H	Mcters	June 17, 1890
430,569	Dowst, S. M. aud Hosmer, F. H.	Telephones, systems	June 17, 1890
430,580 430,606	Alexander W W	Railways, systems, overhead, trolleys	June 17, 1890 Tune 24, 1890
430,607	Alexander, W. W.	Telephones, calls	June 24, 1890
430,608	Alexander, W. W.	do	June 24, 1890
430,622 430,633	Chase, J	Lights, arc, special features	June 24, 1890
430,634		Regulators	
430,636	Gill, E. R., jr	Telephones, calls	June 24, 1890
430,637 430,645	Heath I	Railway signalsLights, incandescent, special features	June 24, 1890
430,675	Nelson, D. C. and Eaton, W. R	Railways, systems, overhead, trolleys	June 24, 1890
430,686	Rae, F. B	Electric locomotives	June 24, 1890
430,688 430,690	Robinson W	Systems of distribution	June 24, 1890 June 24, 1890
430,696	Seaman, W. H	Conductors, iusulators	June 24, 1890
430,722	Word, J. J	Lights, arc, positive feed, gear-clutch	June 24, 1890
430,735 430,747	O'Connell J J	Annunciators Telephones, systems	June 24, 1890
430,748	O'Connell, J. J	do	June 24, 1890
430,758	Smith, H. B	Separators	June 24, 1890
430,764 430,804	Beers, C. B. and Tuttle, W. B.	Magnetic locks and bolts	June 24, 1890
430,838	Dewey, M. W	IndicatorsHeaters	June 24, 1890
430,839	Dewey, M. W	·do	June 24, 1890.

NUMERICAL INDEX—ELECTRICITY.

No.	Name.	Class.	DATE.
430,846 430,865 430,868 430,913 430,926 430,932 430,933 430,934 430,960 430,974 430,979 430,990 430,991 430,992 431,011 431,017 431,018	Conly, M. S Edison, T. A	Galvanometers Regulators Telephones, details Conductors, supports and insulators Lights, incandescent Lights, filaments and carbons Lighting, systems Telephones, systems Cut-outs, thermal Conductors Alarms, burglar Batteries, galvanic	June 24, 1890 June 24, 1890



APPENDIX No. IX.

PART III.

CONSISTING OF A

ALPHABETICAL INDEX OF ALL PATENTS

RELATING TO

ELECTRICITY

Issued from July 1, 1889, to June 30, 1890, inclusive, giving names of Inventors, numbers and dates of Patents, and the sub-class to which each belongs.



ALPHABETICAL INDEX

OI

PATENTS RELATING TO ELECTRICITY

From July 1, 1889, to June 30, 1890.

No.	NAME.	CLASS.	Date.		
412,579	Abdank-Abakanowicz, A	Telephones, electric	Oct. 8, 1889		
412,580	Abdank-Abakanowicz, A	do			
407,761	Acheson, E. G	Magneto-electric			
407,762 407,763	Acheson, E. G	do			
407,763	Acheson, E. G	do			
421,887	Adair, J	Locomotion	Feb. 25, 1890		
414,933 414,132	Adams, F. U	Street lamps' Telephones, supports	Nov. 12, 1889 Oct. 29, 1889		
408,334	Adams, T. E	Locomotion	Aug. 6, 1889		
413.818	Adams, T. E	do	Oct. 29, 1889		
416,284	Adams, T. E	Connectors	Dec. 3, 1889		
419,618	Adams, T. E				
421,469	Adeney, W. E. and Saunderson, L	Lights, filaments and carbons	Feb. 18, 1890		
430,260	Alcock, A. U. and Galopin, H	Lights, arc, gravity feed, clutch	June 17, 1890		
408,367 430,606	Aldrich, N. BAlexander, W. W	Batteries, secondary Electro-magnets	Aug. 6, 1889 June 24, 1890		
430,607	Alexander, W. W.	Telephones, calls	June 24, 1890 June 24, 1890		
430,608	Alexander, W. W.	do			
409,815	Allen, R. N	Locomotion			
429,107	Allen, R. N	Electric locomotives			
415,490	Allen, W. H	Batteries, secondary	Nov. 19, 1889		
428,586	Alton, G. H	Cut-outs, mechanical	May 27, 1890		
421,222	Alton, G. H. and Wakefield, W. O	Magneto-electric	Feb. 11, 1890		
414,000 423,654	Amet, E. H	Vending apparatus	Oct. 29, 1889		
406,981	Amory, A. and R	Applications, generalBatteries, secondary, applications	Mar. 18, 1890 July 16, 1889		
412,157	Andersen, A	Locomotion			
429.054	Andersen, J. M	Cut-outs, mechanical	June 10, 1890		
412,155	Anderson, A		Oct. 1, 1889		
414,362	Anderson, A	Connectors	Nov. 5, 1889		
406,982	Anderson, F	Telegraphy, automatic	July 16, 1889		
407,460	Anderson, F	do	July 23, 1889		
407,461 $407,462$	Anderson, F	do	July 23, 1889 July 23, 1889		
426,749	Anderson, F	do	Apr. 29, 1890		
429,109	Anderson, F	Motors, alternating	June 3, 1890		
428,545	Andrews, E	Insulators	May 20, 1890		
406,415	Andrews, W. S. and Spencer, T		July 9, 1889		
411,414	Anthony, W. A	Separators	Sept. 24, 1889		
421,090 427,823	Anthony, W. A	Motors	Feb. 11, 1890 May 13, 1890		
411,772	Anthony, W. A	Annunciators	Oct. 1, 1889		
418,778	Armstrong, C. G	Telegraphy, fire			
418,837	Armstrong, C. G	Batteries, galvanic	Jan. 7, 1890		
428,443	Ashbaugh, J. I	Heaters	May 20, 1890		
412,449	Askew, C. B	Rheostats			
413,011	Asmus, G. C.	Lights, arc, special features			
427,951	Atterbury, T. B.	Lamp-shades			
$411,950 \\ 422,107$	Atwater, A. S. Ayer, C. H.	Magneto-electric Medical and surgical, body-wear			
420,710	Bache, R. M	Electrodes			
406,498	Backstrom, C. A	Lights, incandescent			
415,338	Backus, E	Car brakes	Nov. 19, 1889		
424,401	Bagby, W. J.	Meters	Mar. 25, 1890		
418,636	Baillard, G. C	Lights, incandescent, special features	Dec. 31, 1889		
427,032	Bain, F	Rheostats	May 6, 1890		
417,217 413,429	Baker, C. D. and Bronson, L. G Baker, E. B	Telegraphy, relays and soundersTelegraphy, lightning arresters	Dec. 17, 1889 Oct. 22, 1889		
406,331	Baker, W. H	Connectors	July 2, 1889		
100,001	Dunci, II.	COMMOCIONS	July 2, 1000		

No.	Name.	Class.	Date.
417,132	Baldwin, C. W		Dec. 10, 1889
417,402	Balsley, U. H		Dec. 17, 1889
408,948 408,157	Barker, W. H		Aug. 13, 1889 July 30, 1889
414,626	Barrett, J. A	Induction coils	Nov. 5, 1889
414,627	Barrett, J. A	Batteries, galvauic	Nov. 5, 1889
424,751	Barrett, J. A	Conductors	Apr. 1, 1890
411,370	Barrett, S. H	Batteries, secondary	Sept. 17, 1889
413,160 + 430,504	Barrett, M. M. and Daly, J. F	Air and gas engines, explosive	Oct. 22, 1889 June 17, 1890
430,505	Barrett, M. M. and Daly, J. F	do	June 17, 1890
430,506	Barrett, M. M. and Daly, J. F	`do	June 17, 1890
423,891	Barriett, S. L.	Motors	Mar. 18, 1890
420,139 416,662	Barringer, J. J. and Johnston, T. H Bartlett, S. H	Street lamps Friction generators	Jan. 28, 1890 Dec. 3, 1889
422,174	Bartlett, S. H. and Waite, H. E.	Telephones, details	
429,594	Bartlett, W. A.	Air and spring gnns	June 10, 1890
423,405	Barton, S.	Ships, snbmarine and torpedo	Mar. 11, 1890
429,751	Barnard, J. H	Meters details	
$\frac{417,660}{425,726}$	Barney, W. C	Telephones, detailsCut-outs, electro-magnetic	Dec. 17, 1889 Apr. 15, 1890
415,491	Bates, P. S	Meters	Nov. 19, 1889
414,966	Battershall, J. W	Cnt-outs, mechanical	Nov. 12, 1889
423,207 420,984	Bauer, A. H	Lights, incandescent, special features	Mar. 11, 1890
420,984	Bayne, G. G.—————————————————————————————————	Telegraphy, lightning arresters	Feb. 11, 1890 Mar. 25, 1890
420,183	Beach, F. G. and Cook, F. B	Telephones, systems	Jan. 28, 1890
424,752	Beach, R. H	Lights, arc, positive feed	Apr. 1, 1890
429,596	Beattie, J., jr	Batteries, galvanic	June 10, 1890
412,013 430,764	Beebc, E. W Beers, C. B. and Tuttle, W. B	Thermostats Magnetic locks and bolts	Oct. 1, 1889 June 24, 1890
415,695	Belding, W. S	Magneto-electric	Nov. 26, 1889
415,696	Belding, W. S	do	Nov. 26, 1889
415,697	Belding, W. S	do	Nov. 26, 1889
415,805 415,806	Belding, W. S	Machines for winding Magneto-electric	Nov. 26, 1889 Nov. 26, 1889
430,058	Ball, C. M. and Norton, S	Separators	June 10, 1890
430,913	Bell, E. B	Telephones, details	June 24, 1890
427,540	Bell, L	Telcgraphy, lightning arresters	May 13, 1890
427,541 413,890	Bell, L	Railways, systems, circuits, multiple arc	May 13, 1890 Oct. 29, 1889
410,871	Bemis, S. A. and Pfingst, L	do	Sept. 10, 1889
407,154	Bennett, E. H., jr	Magneto-electric	July 16, 1889
412,159	Bennett, F. M	Cnt-onts, mechanical	Oct. 1, 1889
409,135 424,699	Bentley E M	Rheostats	Ang. 13, 1889 Apr. 1, 1890
424,845	Bentley, E. M	do	Apr. 1, 1890
426,580	Bentley, E. M	do	Apr. 29, 1890
427,724 $427,725$		Cnt-outs, electro-magnetic	May 13, 1890
427,726	Bentley, E. M	Locomotiondo	May 13, 1890 May 13, 1890
430,060	Bentley, E. M	Systems of distribution	June 10, 1890
430,263		Railway signals	
412,361 424,595	Bergmann S and Scott C B	Lights, sockets and keys	Oct. 8, 1889
422,705	Berrenberg, A. and Umbehend. J	Cut-onts, mechanical	Mar. 4, 1890
425,853	Berne, A. W	Telephones, systems	Apr. 15, 1890
416,090		Gearing	
420,762 425,061		Meters	
429,255		Conductors, lead-covered	
429,599	Bishop, J. D	Annunciators	June 10, 1890
409,628	Bishop, W. S	Cnt-outs, thermal	Ang. 20, 1889
419,308 419,309	Black, B. J. and Jenkins W F	Locomotiondo	Jan. 14, 1890 Jan. 14, 1890
406,420	Blackwell, F. O	do	July 9, 1889
406,421	Blackwell, F. O	do	July 9, 1889
408,647	Blackwell, F. O	Rheostats	Aug. 6, 1889
410,264 $410,265$	Blackwell, F. O.	LocomotionMagneto-electric	Sept. 3, 1889
417,974		Locomotion	
424,848	Blackwell, F. O	do	Apr. 1, 1890
425,488		do	
425,489 426,102		do	
	Dl-J IT IT	Motors	Top. 7 1900
418,978	Blades, fl. fl	Telephones, details	Jan. 1, 1000

Y.	Num	Ox Log	Dim
No.	NAME.	CLASS.	DATE,
425,202	Blanchard, S. W	Elevators	Apr. 8, 1890
423,210	Blathy, O. T	Meters	Mar. 11, 1890
429,413	Blauvelt, W. S.	Railways, systems, overhead, trolleys	
426,705 426,706	Bleakley, W. M Bleoo, J. H	Alarms, burglar	Apr. 29, 1890 Apr. 29, 1890
411,088	Boardman, F. R	Lights, are and incandescent	
421,851	Bock, L., jr	Indicators	Feb. 18, 1890
424,535	Bock, L., jr	Motors	
408,205 408,206	Boissier, H. R	Regulators ————————————————————————————————————	
415,700	Bonta, J. W	Telephones, magnetic	Nov. 26, 1889
420,858	Boss, G. W	Railway signals	Feb. 4, 1890
420,859	Boss, G. W.	do	
408,286	Bottome, T. D	Lights, filaments and carbons Batteries, secondary	Aug. 6, 1889
408,287 414,792	Bottome, T. D	Cut-outs, thermal	Nov. 12, 1889
406,423	Bower, J. F	Annunciators	
422,876	Bower, J. F		
428,038	Bowen, E. H	Magneto-electric	
427,221 421,479	Boynton, E. M.——————————————————————————————————	Locomotion———————————————————————————————————	
427,294	Brace, De W. B.	do	May 6, 1890
415,936	Bradbury, J. G. and Stone, F. J	Batteries, secondary	Nov. 26, 1889
410,663	Bradford, J. M	Regulators	Sept. 10, 1889
429,333 409,448	Bradley C S	Batteries, secondary	
409,448	Bradley, C. S.	Transmission of power	Aug. 20, 1889
409,450	Bradley, C. S	do	
420,764	Bradley, C. S	Batteries, thermal	Feb. 4, 1890
425,741	Bradley, J. J	Lights, sockets and keys	
415,896 415,897	Bradner, W. F.	Drop-lights and hangers	
413,220	Brady, T. H	Lights, arc, special features	
418,270	Braun, D. J	Lights, incandescent, special features	
428,066	Breese, C. P	Lights, arc, positive feed, clutch	May 20, 1890
427,966 426,657	Brill, G. M. and J. ABrill, J. A	Railway cars, trucks	May 13, 1890 Apr. 29, 1890
426,658	Brill, J. A	do	
426,708	Brill, J. A	do	
430,373	Broichgans, S	Alarms, burglar	June 17, 1890
408,574	Brooks, D., jr	Conductors, lead-covered	Ang. 6, 1889
410,953 427,039	Brooks, D., jrBrooks, D., jr	Conductors, underground	Sept. 10, 1889 May 6, 1890
429,113	Brown, B. F.	Railways, systems, overhead, trolleys	June 3, 1890
422,910	Brown, H. P	Lighting, systems	Mar. 11, 1890
428,071	Brown, H. P	Locomotion	May 20, 1890
428,072 420,552	Brown, H. P Brown, J. E. and J. F	Lights, incandescent, special features	May 20, 1890 Feb. 4, 1890
428,073	Brown, L. V	Magneto-electric	May 20, 1890
423,901	Brown, R. G	Telegraphy, multiplex	Mar. 25, 1890
423,902	Brown, R. G	do	Mar. 25, 1890
423,903	Brown, R. G	Motors	Mar. 25, 1890
431,020 425,929	Bruckner, C. C. and Baleck, S. W	MotorsEngraving	June 24, 1890 Apr. 15, 1890
423,023	Bruner, A	Conductors, underground	Mar. 11, 1890
423,549	Brunning, C. E	Medical and surgical, body-wear	Mar. 18, 1890
427,548	Brush, C. F	Cut-outs, thermal	May 13, 1890
428,742 428,743	Brush, C. F Brush, C. F	Magneto-electric	
406,874	Buckley, J	Motors	
407,327	Bnell, C. E.	Magneto-electric, hand-machines	July 23, 1889
421,852	Bulen, G. F	Thermostats	
421,853 421,854	Bulen, G. F	Telegraphy, fire	
430.461	Bnll, W. B	Incrustation	
430,462	Bull, W. B	do	June 17, 1890
419,312	Bnlluck, W	Alarms	Jan. 14, 1890
418,443	Bunnell, J. H	Telegraphy, relays and sounders	
418,444 419,633	Bunnell, J. H Bunnell, W	Lights, arc, gravity feed, gear-clutch Batteries, galvanic	Dec. 31, 1889 Jan. 21, 1890
429,115	Burry, J	Telegraphy, printing	June 3, 1890
428,888	Bnrt, E. M	Batteries, galvanic	May 27, 1890
	Burt, M. C	Gas	Dec. 31, 1889
418,550		1	D 91 1000
418,551	Burt, M. C	do	Dec. 31, 1889
		do	Dec. 31, 1889 June 10, 1890

Heaters	No.	Name.	CLASS.	DATE.
197,549 Burton, J. M. Applications, tools and machines May 18, 1 439,463 Busenbenz, J. J. Creding apparatus June 17, 1 439,463 Busenbenz, J. J. Creding apparatus June 17, 1 429,91 Butterfield, H. R. Motors Motors Mar. 14, 1 429,91 Butterfield, H. R. Motors Mar. 25, 1 424,4403 Butterfield, H. R. Heters Moz. 24, 1 4404 Butterfield, H. R. and Mitchell, W. — do Mar. 25, 1 424,404 Butterfield, H. R. and Mitchell, W. — do Mar. 25, 1 424,404 Butterfield, H. R. and Mitchell, W. — do Mar. 25, 1 424,404 Butterfield, H. R. and Mitchell, W. — do Mar. 25, 1 424,404 Butterfield, H. R. and Mitchell, W. — do Mar. 25, 1 424,404 Butterfield, H. R. and Mitchell, W. — do Mar. 25, 1 424,404 Butterfield, H. R. and Mitchell, W. — do Mar. 25, 1 424,404 Butterfield, H. R. and Mitchell, W. — do Mar. 25, 1 424,404 Butterfield, H. R. and Mitchell, W. — do Mar. 25, 1 424,404 Butterfield, H. R. and Mitchell, W. — do Mar. 25, 1 424,404 424,403 Butterfield, H. R. Mar. 41,405 Mar. 41,40		Burton, G. D	Telegraphy, railway-car	May 6, 1890
197,296 Busby, J. F. Insulators May 6, 1 430,463 Buse, A. R. Vending apparatus June 17, 1 425,295 Bush, A. R. Cut-outs, thermal. Sept. 14, 11, 129 Bussman, O. S. Cut-outs, thermal. Sept. 14, 11, 129 Bussman, O. S. Cut-outs, thermal. Sept. 14, 11, 129 Bussman, O. S. Cut-outs, thermal. Sept. 14, 11, 129 Cut-outs, thermal. Sept. 14, 124, 140 Butterfield, H. R. and Mirchell, W. do Mar. 25, 1 424,404 Butterfield, H. R. and Mirchell, W. do Mar. 25, 1 424,404 Butterfield, H. R. and Mirchell, W. do Mar. 25, 1 424,404 Butterfield, H. R. and Mirchell, W. do Mar. 25, 1 409,316 Buts, A. M. Thermostats Aug. 20, 1 409,316 Buts, A. M. Thermostats Aug. 20, 1 409,316 Buts, A. M. Thermostats Aug. 20, 1 409,313 Cade, B. Locamotion Aug. 13, 1 419,233 Cade, B. Locamotion Aug. 13, 1 419,314 Cade, B. Locamotion Aug. 13, 1 419,314 Cade, B. Locamotion Mar. 18, 1 411,317 Campbell, H. F. Conductors, and-inductive Sept. 17, 1 413,707 Campbell, H. F. Conductors, and-inductive Sept. 17, 1 423,426 Carpek, J. V. Heaten Aug. 11, 1 424,922 Capek, J. V. Heaten Aug. 12, 1 424,922 Capek, J. Capek, J. Capek, J. Capek, J. Capek, J. Capek, J. Capek		Burton, G. D	Heaters	
430,463 Busenbenz, J. J. Vending apparatus June 17, 1 425,205 Bush, A. R. Cut-outs, mechanical App. 8, 21, 1 411,423 Bussman, O.S. Cut-outs, thermal App. 8, 24, 1 422,911 Butterfield, H. R. Motors Main 1, 1 422,911 Butterfield, H. R. and Mitchell, W. do Main 2, 21, 496,316 Butz, A. M. Thermostats Aug. 9, 1 496,316 Cabell, S. G. Incurstation Aug. 13, 1 492,320 Cable, P. D. Railway signals Feb. 11, 1 419,313 Cade, B. Telegraphy, railway-car. Jan. 14, 1419,313 Cade, B. Telegraphy, railway-car. Jan. 14, 1419,313 Cade, B. Telegraphy, railway-car. Jan. 14, 1419,315 Cade, B. Commotion Merground Main. 14, 1419,315 Cade, B. Commotion Merground Main. 14, 1419,315 Campbell, H. F. Conductors, anti-inductive Sept. 17, 1 42, 4222 Capek, J. V. Heaters App. 1, 1, 142, 4222 Capek, J. V. Heaters App. 1, 1, 142, 4222 Capek, J. V. Heaters App. 1, 1, 142, 4222 Capek, J. V. Heaters App. 1, 1, 142, 4222 Capek, J. V. Heaters App. 1, 1, 142, 4222 Capek, J. V. Heaters App. 1, 1, 142, 4222 Capek, J. V. Heaters App. 1, 1, 142, 4222 Capek, J. V. Heaters App. 1, 1, 142, 4222 Capek, J. V. Heaters App. 1, 1, 142, 4222 Capek, J. V. Heaters App. 1, 1, 142, 4222 Capek, J. V. Applications, tools and machines App. 29, 141, 142, 142, 142, 142, 142, 142, 142	427,296	Bushy, J. F		
111,423 Bussman, O. S.	430,463	Busenbenz, J. J.		June 17, 1890
422.91	425,205	Bush, A. R	Cut-outs, mechanical	Apr. 8, 1890
1924,043 Butterfield, H. R. and Mitchell, W.			Cut-outs, thermal	Sept. 24, 1889
1924,07 Butterfield, H. R. and Mitchell, W.	422,911			
1921-194 Butterfield, H. R. and Mitchell, W.				Mar. 25, 1890
499,136 Cabel, S. G.	424,404			Mar. 25, 1890
1913 20				Aug. 20, 1889
419,313 Cade, B			The state of the s	Aug. 13, 1889
19,314 Cade, B Lecomotion Jan. 14, 14,970 Camp, H. B. Conductors, underground Nov. 12, 123,468 Campbell, G. G Lecomotion Mart. 14,13,70 Campbell, H. F. Conductors, anti-inductive Sept. 17, 1413,70 Campbell, H. F. Conductors, anti-inductive Sept. 17, 1424,921 Capek, J. V Heaters Apr. 1, 1408,910 Card, G. F. Motors Apr. 1, 1408,910 Card, G. F. Motors Apr. 1, 1408,910 Card, G. F. Regulators Oct. 1, 141,733 Card, G. F. Regulators Oct. 1, 141,733 Card, G. F. Cardow, P. Cardow,	419.313	Cade, B.		Jan. 14, 1890
141,470 Camp. H. B.				Jan. 14, 1890
111,137 Campbell, H. F.	414,970	Camp, H. B	Conductors, underground	Nov. 12, 1889
143,707 Campbell, H. F.		Campbell, G. G		Mar. 18, 1890
428,745 Candee, W. L		Campbell, H. F.	Conductors, anti-inductive	
424,922 Capek, J. V.		Candee, W. L	Conductors, lead-covered	May 27, 1890
december december		Capek, J. V		Apr. 1, 1890
11,782 Card, G. F	424,922	Capek, J. V	do	Apr. 1, 1890
11,783 Card, G. F.		Card, G. F		Aug. 13, 1889
1921/240 Cardew, P				
110,638 Carlart, E. M.				Feb. 11, 1890
H12,462 Carley, C. R. Photography, burnishing presses Oct. 8, 1 H29,569 Carpenter, C. E. Heaters Nov. 26, 1 H29,560 Carpenter, C. E. do				Sept. 10, 1889
429,550 Carpenter, C. E.	412,462	Carley, C. R.	Photography, burnishing presses	
429,560 Carpenter, C. E.		Carpenter, C. E	Heaters	Nov. 26, 1889
429,561 Carpenter, C. E.				
429,662 Carpenter, C. F.		Carpenter, C. E	do	June 3, 1890
141,2727 Carpenter, H. H.				June 3, 1890
114,928 Carpenter, H. H.				May 27, 1890
199,933 Carpenter, H. H		Carpenter, H. H		
121,666 Carpenter, H. H				
142,722 Carpenter, H. L				
124,268		Carpenter, H. L	Telephones, calls	Mar. 4, 1890
142,464				
126,666 Carroll, W		Carranza M and Tinoco J M	Inne checks	Oct. 8, 1889
H10,136 Carter, C. H		Carroll, W	Lamp posts	Apr. 29, 1890
11,138 Carter, C. H				Aug. 20, 1889
416,712 Carter, F. S				Aug. 27, 1889
115,765 Carty, J. J				
425,862 Carty, J. J				
427,154 Carty, J. J		Carty, J. J	do	Apr. 15, 1890
427,155 Carty, J. J				Apr. 15, 1890
427,156 Carty, J. J				
427,742				
380,065 Case, J. D., and Evans, C. W	427,742	Carty, J. J	do	May 13, 1890
409,097 Casey, F. M	430,065	Case, J. D., and Evans, C. W.	Music, electric actions	June 10, 1890
419,111 Casey, F. M		Casey F M	Applications tools and masking	June 10, 1890
425,161 Cassard, H. L Telephones, systems Apr. 8, 1 428,828 Cassard, H. L Vending apparatus May 27, 18 422,500 Castner, H. Y Electrolysis, chemicals Mar. 4, 18 419,924 Catz, J Alarms Jan. 21, 18 423,309 Chamberlain, J. C Magneto-electric Mar. 11, 18 427,459 Chamberlain, R. N. and J. C Batteries, secondary Mar. 11, 18 423,310 Chambers, W. H Telegraphy, fire, alarms and extinguishers Apr. 29, 18 414,141 Chapman, F. G. and Dearing, F. M Lights, arc, positive feed Oct. 29, 18 428,454 Chase, H. A Locomotion Sept. 3, 18 430,622 Chase, J Lights, arc, special features June 24, 18 406,994 Chinnock, F. R Insulators July 16, 18 406,994 Chinnock, F. R Insulators July 16, 19 418,682 Christy, W Locomotion Nov. 5, 18		Casey, F. M	Applications, tools and machines	Jan. 7, 1890
428,828 Cassard, H. L Vending apparatus May 27, 14 422,500 Castner, H. Y Electrolysis, chemicals Mar. 4, 14 419,924 Catz, J Alarms Jan. 21, 14 423,309 Chamberlain, J. C Magneto-electric Mar. 11, 14 423,310 Chamberlain, R. N. and J. C Batteries, secondary Mar. 11, 14 426,917 Chambers, W. H Telegraphy, fire, alarms and extinguishers Apr. 29, 14 414,141 Chapman, F. G. and Dearing, F. M Lights, arc, positive feed Oct. 29, 14 410,150 Chase, H. A Locomotion Sept. 3, 14 430,622 Chase, J Lights, arc, special features June 24, 14 416,051 Chassagne, P. J Lights, sockets and keys Nov. 26, 14 406,994 Chinnock, F. R Insulators July 16, 14 414,289 Christe, G. E Telephones, supports Jan. 7, 14 412,289 Christy, W Locomotion Nov. 5, 14		Cassard, H. L	Telephones, systems	Apr. 8, 1890
Alarms Jan. 21, 13		Cassard, H. L	Vending apparatus	May 27, 1890
423,309 Chamberlain, J. C. Magneto-electric Mar. 11, 12 427,459 Chamberlain, J. C. Locomotion May 6, 12 423,310 Chamberlain, R. N. and J. C. Batteries, secondary Mar. 11, 12 426,917 Chambers, W. H. Telegraphy, fire, alarms and extinguishers Apr. 29, 12 414,141 Chapman, F. G. and Dearing, F. M. Lights, arc, positive feed Oct. 29, 12 428,454 Chapman, W. H. Motors May 20, 18 410,150 Chase, H. A. Locomotion Sept. 3, 13 430,622 Chase, J. Lights, arc, special features June 24, 18 416,051 Chassagne, P. J. Lights, sockets and keys Nov. 26, 18 406,994 Chinnock, F. R. Insulators July 16, 18 418,682 Christie, G. E. Telephones, supports Jan. 7, 18 414,289 Christy, W. Locomotion Nov. 5, 18		Castner, H. Y	Electrolysis, chemicals	Mar. 4, 1890
427,459 Chamberlain, J. C.		Chamberlain, J. C.	Magneto-electric	Mar 11 1800
423,310 Chamberlain, R. N. and J. C Batteries, secondary Mar. 11, 12, 12, 12, 12, 12, 12, 12, 12, 12,		Chamberlain, J. C	Locomotion	May 6, 1890
426,917 Chambers, W. H. Telegraphy, fire, alarms and extinguishers. Apr. 29, 13, 14, 141 414,141 Chapman, F. G. and Dearing, F. M. Lights, arc, positive feed. Oct. 29, 14, 14, 14, 14, 14, 14, 14, 14, 14, 14	423,310	Chamberlain, R. N. and J. C	Batteries, secondary	Mar. 11, 1890
428,454 Chapman, W. H ' Motors May 20, 18 410,150 Chase, H. A Locomotion Sept. 3, 18 430,622 Chase, J Lights, arc, special features June 24, 18 416,051 Chassagne, P. J Lights, sockets and keys Nov. 26, 18 406,994 Chinnock, F. R Insulators July 16, 18 418,682 Christie, G. E Telephones, supports Jan. 7, 18 414,289 Christy, W Locomotion Nov. 5, 18		Chambers, W. H	Telegraphy, fire, alarms and extinguishers	Apr. 29, 1890
410,150 Chase, H. A Locomotion Sept. 3, 14 430,622 Chase, J Lights, arc, special features June 24, 14 416,051 Chassagne, P. J Lights, sockets and keys Nov. 26, 14 406,994 Chinnock, F. R Insulators July 16, 14 418,682 Christie, G. E Telephones, supports Jan. 7, 14 414,289 Christy, W Locomotion Nov. 5, 14 416,000 Nov. 5, 15 416,000 Nov. 5, 16 416,000 No		Chapman, F. G. and Dearing, F. M.	Lights, arc, positive feed	Oct. 29, 1889
430,622 Chase, J Lights, arc, special features June 24, 13 416,051 Chassagne, P. J Lights, sockets and keys Nov. 26, 18 406,994 Chinnock, F. R Insulators July 16, 18 418,682 Christie, G. E Telephones, supports Jan. 7, 18 414,289 Christy, W Locomotion Nov. 5, 18				
416,051 Chassagne, P. J. Lights, sockets and keys Nov. 26, 19 406,994 Chinnock, F. R. Insulators July 16, 19 418,682 Christie, G. E Telephones, supports Jan. 7, 19 414,289 Christy, W Locomotion Nov. 5, 19		Chase, J	Lights, arc, special features	June 24, 1890
418,682 Christie, G. E Telephones, supports Jan. 7, 144,289 Christy, W Locomotion Nov. 5, 16	416,051	Chassagne, P. J.	Lights, sockets and keys	Nov. 26, 1889
414,289 Christy, W Locomotion Nov. 5, 19			Insulators	July 16, 1889
				Jan. 7, 1890
428,075 Church, B. S Recorders May 20, 18	428,075			May 20, 1890
426,108 Clark, E. P		Clark, É. P	Regulators	Apr. 22, 1890

128,110 Clark, E. P.	No.	Name.	Class.	Date.
180,717 Cark, J. H.	426,109	Clark, E. P	Regulators	Арт. 22, 1890
1823-94 Clark, M. M. Batteries, galvanic Mar. 18, 38		Clark, E. P.	do	Apr. 22, 1890
1947.05 Carke, G. D		Clark, J. H	Applications, tools and machines	Men 19 1900
148,685 Claus P. and Gengenbach, E. Magneto-electric Jin. 7, 188		Clarke G D	Electro-magnets	
146,092 Clawson, C. C. Kaleidascopes Nov. 20, 184 425,183 Cleveland, W. B		Claus, P. and Gengenbach, E	Magneto-electric	
425,495 Cleveland, W. B.		Clawson, C. C	Kaleidoscopes	
143,705 Coad, T				Aug. 27, 1889
408,574 Cobb, H. B.				
408,376 Cobb, H. B.		Cobb. H. B	Conductors, lead-covered	
408,876 Cobb, H. B.		Cobb, H. B	do	Aug. 6, 1889
429,304 Cobb, H. B		Cobb, H. B.	do	
29,305 Cobb, H. B.		Cobb, H. B	Conductors	Aug. 6, 1889
492,930		Cobb H R	do	June 3, 1890
499,307 Cobb, H. B.		(obb. H. B	do	June 3 1890
H19,529	429,307	Cobb, H. B.	Conductors, underground	June 3, 1890
409,928 Ce, B. L		Cobb, S. B	Lights, incandescent	Jan. 21, 1890
129,757 Cerper, C				
415,024 Coffin, C. C. Electro-deposition Nov. 12, 185		Coerner C	Lights are gravity feed gear-clutch	June 10, 1889
409,015 Coffin, C. L				Nov. 12, 1889
412,590 Coffin, C. L.		Coffin, C. L	Heaters	Aug. 13, 1889
419,033 Cuffin, C. L.		Coffin, C. L	do	Oct. 8, 1889
422,730 Coffin, C. I.		Coffin, C. L	do	Jan. 7, 1890
423,732 Coffin, C. L				
423,733 Coffin C L	423,732			
423,735 Coffin. C. L.				Mar. 18, 1890
423,736 Coffin C. L.		Coffin, C. L	do	
425,164 Coffin, C. L		Coffin, C. L		
427,971 Coffin, C. L				
428,459 Coffin, C. L.	427,971			
410,493 Cohen, R. L	428,459			May 20, 1890
428,378 Colby, E. A Reducing and separating apparatus May 20, 189				Sept. 3, 1889
428,379 Colby, E. A			Magneto-electric	Mar. 11, 1890
28,552 Colby, E. A.			do	
124,273 Coley, E. A. and Strong, J. C Clocks, electric Mar. 25, 189	428,552	Colby, E. A		May 20, 1890
Sept. 17, 188 Sept. 17, 18	424,273	Colby, E. A. and Strong, J. C.	Clocks, electric	Mar. 25, 1890
429,887 Colete, J. W				
109,299 Collier, J. W				_ " . /
144,91		Collier, J. W		
Separators July 2, 188	414,191	Conant, H. J	Regulators	Nov. 5, 1889
Alo,876			Railway signals	Dec. 10, 1889
410,877			Separators	July 2, 1888
420,334				
422,732	420,334			Jan. 28, 1890
11,012		Conkling, G	do	Mar. 4, 1890
428,041 Conly, M. S Railway signals May 13, 189 428,042 Conly, M. S Applications, general May 13, 189 431,017 Conly, M. S Railway signals June 24, 189 420,638 Conner, W. A Corner, W. A Feb. 4, 189 416,572 Conz, G. W. M Telegraphy, circuit-closers Dec. 3, 188 406,818 Cook, G. W Conductors, underground July 9, 188 407,950 Cooke, A. R Dental instruments July 30, 188 423,909 Cooley, C. A Cooley, C. A Dec. 3, 188 416,443 Cooley, W. H Magneto-electric Dec. 3, 188 410,786 Cooper, A. J. and Wigzell, E. E Recorders Sept. 10, 188 417,407 Cooper, A. S Telegraphy, automatic Dec. 3, 188 422,295 Cooper, W. B Magneto-electric Feb. 25, 189 421,134 Cope, T. J Conductors, underground Mar. 11, 189 426,436 Corlies, G. F Locomotion Apr. 29, 189 421,093 Condetors, G. F Locomotion <td></td> <td></td> <td></td> <td></td>				
428,042 Conly, M. S Applications, general May 18, 189 431,017 Conly, M. S Railway signals June 24, 189 420,638 Conner, W. A Conductors Feb. 4, 189 424,761 Conroy, J. C Valve-controllers Apr. 1, 189 406,818 Cook, G. W Conductors, underground July 9, 188 406,818 Cook, G. W Conductors, underground July 30, 188 416,254 Cooley, C. A Covering cord Dec. 3, 188 423,909 Cooley, W. H Magneto-electric Dec. 3, 188 410,786 Cooper, A. J. and Wigzell, E. E Recorders Sept. 10, 188 417,407 Cooper, A. S Telegraphy, automatic Dec. 17, 188 417,407 Cooper, A. S Telegraphy, fire Dec. 17, 188 422,295 Cooper, W. B Magneto-electric Feb. 25, 189 421,134 Cope, T. J Conductors, underground Mar. 11, 189 426,436 Corles, G. F Locomotion Apr. 29, 189 426,436 Corles, G. F Locomotion				
A31,017 Conly, M. S.			Applications, general	
420,638	431,017		Railway signals	June 24, 1890
Telegraphy, circuit-closers Dec. 3, 188				
A06,818 Cook, G. W Conductors, underground July 9, 188		Cong G W M		
407,950 Cooke, A. R		Cook, G. W		
Alf,254 Cooley, C. A. Covering cord Dec. 3, 188			Dental instruments	July 30, 1889
Magneto-electric Dec. 3, 188		Cooley, C. A.	Covering cord	Dec. 3, 1889
410,786 Cooper, A. J. and Wigzell, E. E. Recorders Sept. 10, 188 418,889 Cooper, A. J. and Wigzell, E. E. Bathometers Jan. 7, 189 417,407 Cooper, A. S. Telegraphy, automatic Dec. 17, 188 422,295 Cooper, W. B. Magneto-electric Feb. 25, 189 421,134 Cope, T. J. Conductors, underground Mar. 11, 189 427,746 Cordley, W. J. Railways, systems, closed conduit May 13, 189 426,436 Corliss, G. F. Locomotion Apr. 29, 189 419,642 Cornog, I. P. Insulators Jan. 7, 188 411,093 Cougblin, W. H. Connectors Sept. 17, 188 520 Connectors Sept. 17, 188 53 Cooper, A. J. and Wigzell, E. E. Recorders Sept. 10, 188 541,047 Cooper, A. J. and Wigzell, E. E. Recorders Sept. 10, 188 541,047 Cooper, A. J. and Wigzell, E. E. Recorders Sept. 10, 188 541,047 Cooper, A. J. and Wigzell, E. E. Recorders Sept. 10, 188 541,047 Cooper, A. J. and Wigzell, E. E. Recorders Jan. 7, 189 541,047 Cooper, A. J. and Wigzell, E. E. Bathometers Jan. 7, 189 541,047 Cooper, A. J. and Wigzell, E. E. Bathometers Jan. 7, 189 541,047 Cooper, A. J. and Wigzell, E. E. Bathometers Jan. 7, 189 541,047 Cooper, A. J. and Wigzell, E. E. Bathometers Jan. 7, 189 541,047 Cooper, A. J. and Wigzell, E. E. Bathometers Jan. 7, 189 542,447 Cooper, A. J. and Wigzell, E. E. Bathometers Jan. 7, 189 541,047 Cooper, A. J. and Wigzell, E. E. Bathometers Jan. 7, 189 542,447 Cooper, A. J. and Wigzell, E. E. Bathometers Jan. 7, 189 542,447 Cooper, A. J. and Wigzell, E. E. Bathometers Jan. 7, 189 542,447 Cooper, T. Cooper, T			Regulators	Mar. 25, 1890
418,889 Cooper, A. J. and Wigzell, E. E Bathometers Jan. 7, 189 417,407 Cooper, A. S. Telegraphy, automatic Dec. 17, 188 416,444 Cooper, T Telegraphy, fire Dec. 3, 188 422,295 Cooper, W. B Magneto-electric Feb. 25, 189 421,134 Cope, T. J Conductors, underground Mar. 11, 189 427,746 Cordley, W. J Railways, systems, closed conduit May 13, 189 426,436 Corliss, G. F Locomotion Apr. 29, 189 419,642 Cornog, I. P Insulators Jan. 21, 189 411,093 Cougblin, W. H Connectors Sept. 17, 188				
417,407 Cooper, A. S Telegraphy, automatic Dec. 17, 188				
Telegraphy, fire Dec. 3, 188	417,407		Telegraphy, automatic	Dec. 17, 1889
422,295 Cooper, W. B. Magneto-electric Feb. 25, 189 421,134 Cope, T. J. Conductors, underground Mar. 11, 189 427,746 Cordley, W. J. Railways, systems, closed conduit May 13, 189 426,436 Corliss, G. F. Locomotion Apr. 29, 189 419,642 Cornog, I. P. Insulators Jan. 21, 189 411,093 Cougblin, W. H Connectors Sept. 17, 188		Cooper, T	Telegraphy, fire	Dec. 3, 1889
427,746 Cordley, W. J Railways, systems, closed conduit May 13, 189 426,436 Corliss, G. F Locomotion Apr. 29, 189 419,642 Cornog, I. P Insulators Jan. 21, 189 411,093 Cougblin, W. H Connectors Sept. 17, 188		Coper, W. B.	Magneto-electric	Feb. 25, 1890
426,436 Corliss, G. F. Locomotion Apr. 29, 189 419,642 Cornog, I. P. Insulators Jan. 21, 189 411,093 Cougblin, W. H Connectors Sept. 17, 188			Railwaye systems aloged conduit	Mar. 11, 1890
419,642 Cornog, I. P. Jan. 21, 189 411,093 Cougblin, W. H. Connectors Sept. 17, 188			Locomotion	Apr. 29, 1890
411,093 Coughlin, W. H Connectors Sept. 17, 188	419,642	Cornog, I. P	Insulators	Jan. 21, 1890
406,629 Coulter, G. A. Telegraphy, fire, alarms and extinguishers July 9, 188	411,093 406,629	Cougblin, W. H	Connectors	Sept. 17, 1889

No. 2	NAME.	CLASS.	DATE.
416,573	Covert, D'E. S. and Pumpelly, J. K	Batteries, secondary	Dec. 3, 1889
11,049	Cowley, J. T	Store service	Dec. 24, 1889
414,295 418,910	Cox, Č. A. and J. F.	Railway brakes, derailmentRailway signals	
424,860	Cox, C. A. and J. F	Telegraphy, fire, alarms and extinguishers	Apr. 1, 1890
411,713	Cox, F. P	Lights, arc, positive feed, gear-clutch	Sept. 24, 1889
412,165	Cox, H. B.	Electrodes	Oct. 1, 1889
414,612 425,370	Cox-Walker, E. and Swiuton, A. A. C. Coyle, A. M	Vending apparatus	Nov. 5, 1889 Apr. 8, 1890
424,406	Crane, W. F. D	Magneto-electric	Mar. 25, 1890
428,380	Croasdale, E	The same of the sa	May 20, 1890
430,175 427,974	Crockett, C. H. and Allen, C. C. Crossley, L.J., Emmott, W. and Harrison, J. F.	Telephones, systems	June 17, 1890 May 13, 1890
413,848	Crull, E. S	Telegraphy, keys	Oct. 29, 1889
419,645	Culbertson, J. N	Telephones, systems	Jan. 21, 1890
419,186 414,681	Culman, D. A., jr Culver, F. E	Railways, traction, underground	Jan. 14, 1890 Nov. 12, 1889
429,844	Culver, J. P	Drain tiles	June 10, 1890
408,829	Cumnock, V. I	Knitting and netting, stopping	Aug. 13, 1889
414,025	Cumnock, V. I.		Oct. 29, 1889 Feb. 18, 1890
421,677 406,267	Cunningham, J. H	Batteries, secondary	July 2, 1889
406,268	Currie, S. C. C	Cut-outs, thermal	July 2, 1889
406,429	Currie, S. C. C	Magneto-electric	July 9, 1889
408,590 410,153	Currie, S. C. C.	Batteries, secondary, applications	Aug. 6, 1889 Sept. 3, 1889
411,786	Currie, S. C. C.		Oct. 1, 1889
411,787	Currie, S. C. C	do	Oct. 1, 1889
412,323 415,766	Curric, S. C. C.	Batteries, secondary, applications	Oct. 8, 1889 Nov. 26, 1889
419,245	Currie, S. C. C.	Motors	Jan. 14, 1890
421,067	Currie, S. C. C	Electro-magnets	Feb. 11, 1890
422,504 422,505	Currie, S. C. C.	Batteries, secondary	Mar. 4, 1890
423,029	Currie, S. C. C.	Regulators	Mar. 4, 1890 Mar. 11, 1890
427,748	Currie, S. C. C.	Meters	May 13, 1890
427,749	Currie, S. C. C	Talankanas salla	May 13, 1890
425,594 412,476	Cushing, J. P	Telephones, calls	Apr. 15, 1890 Oct. 8, 1889
429,189	Cushing, J. P.	1ndicators	June 3, 1890
407,470	Cutler, H. H	Locomotion	July 23, 1889
421,371 ³ 426,989	Cutler, J. L	Telephones, calls	Feb. 11, 1890 Apr. 29, 1890
410,498	Daft, L	Locomotion	Sept. 3, 1889
412,605	Daft, L	do	Oct. 8, 1889
427,674 411,426	Daft, L	Magneto-electric Batteries, secondary	May 13, 1890 Sept. 24, 1889
426,778	Dalton, J	Drop-lights and hangers	Apr. 29, 1890
416,720	Dalzell, J. A	Magneto-electric	Dec. 10, 1889
411,238 415,190	Danals, C. A.——————————————————————————————————	Cut-outs, electro-magnetic	Sept. 17, 1889 Nov. 19, 1889
418,402	Darling, W. H	Car-brakes	Dec. 31, 1889
419,753	Darling, W. H	Locomotion	Jan. 21, 1890
411,427 424,006		Conductors, underground Telegraphy, circuits and systems	Sept. 24, 1889 Mar. 25, 1890
420,777	Davis, F. E. and Scott, J., jr	Covering cord	Feb. 4, 1890
425,990	Davis, F. E. and Scott, J., jr-	do	Apr. 22, 1890
425,991 428,201	Davis, F. E. and Scott, J., jr————————————————————————————————————		Apr. 22, 1890 May 20, 1890
421,484	Davis, G. E	Covering cord Photography, cameras	Feb. 18, 1890
430,990	Davis, J. H	Batteries, galvanic	June 24, 1890
430,991 426,583	Davis, J. H	Lights, filaments and carbons	June 24, 1890
420,585	Davis, M. M Davis, W. M	Telegraphy, circuits and systems	Apr. 29, 1890 Sept. 10, 1889
430,926	Davis, W. M	Conductors, supports and insulators	June 24, 1890
421,819 414,798	Davy, J. W	Insulators	Feb. 18, 1890
416,447	Daws, A	Drop-lights and hangers	Nov. 12, 1889 Dec. 3, 1889
406,709	Dawson, J. W	Alarms, burglar	July 9, 1889
427,953	De Baillehache, E. J. J	Railway signals	May 13, 1890
413,436	De Ferranti, S. Z	Telegraphy, fire	Oct. 22, 1889 Aug. 20, 1889
408,295	De Ferranti, S. Z	Meters	Aug. 6, 1889
408,403	De Ferranti, S. Z	Magneto-electric	Aug. 6, 1889
408,404	De Ferranti, S. Z	Systems of distribution	Aug. 6, 1889
409,182	De Ferranti, S. Z		

No. NAME CLASS DATE	_			
409,565 De Ferranti, S. Z	No.	Name.	CLASS.	DATE.
409,565 De Ferranti, S. Z	409.349	De Ferranti, S. Z	Magneto-electric	Aug. 20, 1889
409,775 De Ferranti, S. Z	409,565	De Ferranti, S. Z		
422.75 De Ferranti, S. Z. Motors, alternating Mar. 4, 1879, 1820, 1823, 1820, 1823, 1820, 1823, 1820, 1823, 1820, 1823, 1820, 1823, 1820, 1823, 1820, 1823, 1820, 1823, 1824, 1823, 1824, 1823, 1824, 1823, 1824, 1823, 1824,				
423,991 De Ferranti, S. Z. Magneto-electric Mar 25, 1890 429,533 De Khotinsky, A				
197,51 De Ferrant, S. Z			Magneto-electric	
499,55 De Khotinsky, A	427,751	De Ferranti, S. Z	Inductoriums, transformers, stationary	
406,997 Delany, P. B.				
1416,245 Delany, P. B			Batteries galvanic	
417,814 Delany, P. B		Delany, P. B		
426,247 Delany, P. B	417,814	Delany, P. B	Batteries, galvanic	
417,992 Dell. J			Telegraphy, relays and sounders	
1941 182 Dempf, J. A.				
1410,318 Denison, S. P.	424,182		Telegraphy, circuit-closers	
413,134 Denison, S. P.	410,318			
409,003 De Vars, H. A. B. H. Metalloids Aug. 27, 1889				
480,515 Devore, D. B. Railways, systems, conduit. June 17, 1890 490,937 Develin, T. C. Gane counters Aug. 27, 1889 406,300 Dewey, M. W Heaters July 2, 1889 407,581 Dewey, M. W Applications, general Aug. 6, 1889 408,545 Dewey, M. W Applications, general Aug. 6, 1889 408,545 Dewey, M. W Applications, general Aug. 6, 1889 408,545 Dewey, M. W Applications, general Aug. 6, 1889 408,545 Dewey, M. W Batteries, secondary, applications Nov. 12, 1889 414,943 Dewey, M. W Batteries, secondary, applications Nov. 12, 1889 418,941 Dewey, M. W Systems of distribution Jan. 7, 1890 418,841 Dewey, M. W Locomotion Jan. 7, 1890 422,130 Dewey, M. W Heaters Feb. 4, 1890 422,130 Dewey, M. W Dewey, M. W Devey, M				
106,800 Dewey, M. W	430,515	Devore, D. B	Railways, systems, conduit	June 17, 1890
Heaters			Game counters	
407,581 Dewey, M. W				
408,875 Dewey, M. W				
High Batteries, secondary, applications Nov. 12, 1889 High Heaters Dec. 3, 1889 High Heaters Dec. 4, 1890 Heaters Dec. 7, 1890 Heaters D	408,465	Dewey, M. W		Aug. 6, 1889
Hid,340 Dewey, M. W				
Heaters				
1418,912 Dewey, M. W		Dewey, M. W	Heaters	
19.841 Dewey, M. W				
Heaters		Dewey W W		
492,190 Dewey, M. W				
425,575		Dewey, M. W		
425,866 Dewey, M. W		Dewey, M. W		
Heaters				
Heaters	426,781	Dewey, M. W		Apr. 29, 1890
Devey, M. W		Dewey, M. W		
148,700 Dey, H. E				
148,702 Dey, H. E	406,822	Dey, H. E		
18,702 Dey, H. E	418,700	Dey, H. E	D-th-sign and I	Jan. 7, 1890
148,703 Dey, H. E		Dev H E	do	Jan. 7, 1890 Jan. 7, 1890
406,391 Dibble, H. D	418,703			/
420,622 Dickerson, E. N., jr Cut-outs, electro-magnetic Fcb. 4, 1890 411,588 Dickson, C. T Telephones, supports Sept. 24, 1889 409,603 Dickson, J. G. and R. and Snyder, P Locomotion Aug. 20, 1889 411,982 Diehl, P Diehl, P do Oct. 1, 1889 414,755 Diehl, P do Nov. 12, 1889 414,755 Diehl, P do Nov. 12, 1889 417,474 Diehl, P do Dec. 17, 1889 421,911 Diehl, P do Dec. 17, 1889 421,911 Diehl, P do Dec. 17, 1889 423,912 Diehl, P Magneto-electric Mar. 25, 1890 425,995 Diehl, P Motors Apr. 22, 1890 417,668 Dihlmann, C Systems of distribution Dec. 17, 1899 421,544 Donnelly, A. G Fog signals Apr. 1, 1890 421,544 Donner, W. H Grinding mills, grist alarms Sept. 3, 1889 410,502 Donner, W. H Grinding mills, grist alarms Sept. 3, 1889 406,636 Dougans, M Batteries, galvanic Mar. 11, 1890 Sept. 3, 1889 406,636 Dougans, M Batteries, galvanic Jrily 9, 1889 425,125 Douglass, A Lighting, systems Oct. 15, 1889 427,468 Dows, A Medical and surgical, body-wear July 23, 1889 427,468 Dows, A Medical and surgical, body-wear July 23, 1889 427,468 Dows, A Medical and surgical, body-wear July 23, 1889 427,468 Dows, S. M. and Hosmer, F. H Telephones, systems Dore, W. C. W. and Francis, E. R Heaters Apr. 29, 1890 Drake, C. C Telegraphy, fire June 24, 1890 Drew, C. W. and Francis, E. R Heaters Apr. 29, 1890 Drew, C. W. and Francis, E. R Heaters Apr. 29, 1890 Drew, C. W. and Francis, E. R Heaters Apr. 29, 1890 Drew, C. W. and Francis, E. R Heaters Apr. 29, 1890 Drew, C. W. and Francis, E. R Heaters Apr. 29, 1890 Drew, C. W. and Francis, E. R Heaters Apr. 29, 1890 Drew, C. W. and Francis, E. R Heaters Apr. 29, 1890 Drew, C. W. and Francis, E. R Heaters Apr. 29, 1890 Drew, C. W. and Francis, E. R Heaters Apr. 29, 1890 Drew, C. W. and Francis, E. R Heaters Apr. 29, 1890 Drew, C. W. and Francis, E. R H	406,391			
11,588 Dickson, C. T		Dickerson, E. N., jr		
409,603 Dickson, J. G. and R. and Snyder, P		Dickson, C. T	Telephones, supports	Sept. 24, 1889
411,983 Diehl, P	409,603	Dickson, J. G. and R. and Snyder, P	Locomotion	Aug. 20, 1889
144,757 Diehl, P				
141,758				
421,911 Diehl, P	414,758	Diehl, P	do	Nov. 12, 1889
423,912 Diehl, P				
Apr. 22, 1890				
A17,668	425,995	Diehl, P	Motors	Apr. 22, 1890
424,544 Donnelly, A. G Fog signals Apr. 1, 1890				
Ali,270 Donner, W. H Grinding mills, grist alarms Sept. 3, 1889				
410,502 Donner, W. H do Sept. 3, 1889				
Meters Oct. 15, 1889	410,502	Donner, W. H	do	Sept. 3, 1889
425,125 Douglass, A Lighting, systems Apr. 8, 1890 406,341 Douse, T. R Fire extinguishers, chemical July 2, 1889 407,473 Dow, A Medical and surgical, body-wear July 23, 1889 427,468 Dow, A do May 6, 1890 412,606 Dow, L Printing, setting and distributing Oct. 8, 1889 430,569 Dowst, S. M. and Hosmer, F. H Telephones, systems June 17, 1890 430,992 Drake, C. C Telegraphy, fire June 24, 1890 426,437 Drew, C. W. and Francis, E. R Heaters Apr. 29, 1890 418,664 Dreyer, W Printing, setting and distributing Dec. 31, 1889				
406,341 Douse, T. R. Fire extinguishers, chemical July 2, 1889 407,473 Dow, A. Medical and surgical, body-wear July 23, 1889 427,468 Dow, A. do May 6, 1890 412,666 Dow, L. Printing, setting and distributing Oct. 8, 1889 430,569 Dowst, S. M. and Hosmer, F. H. Telephones, systems June 17, 1890 430,992 Drake, C. C. Telegraphly, fire June 24, 1890 426,437 Drew, C. W. and Francis, E. R. Heaters Apr. 29, 1890 418,664 Dreyer, W. Printing, setting and distributing Dec. 31, 1889				
407,473 Dow, A Medical and surgical, body-wear July 23, 1889 427,463 Dow, A do May 6, 1890 412,606 Dow, L Printing, setting and distributing Oct. 8, 1889 430,569 Dowst, S. M. and Hosmer, F. H Telephones, systems June 17, 1890 430,992 Drake, C. C Telegraphy, fire June 24, 1890 426,437 Drew, C. W. and Francis, E. R Heaters Apr. 29, 1890 418,664 Dreyer, W Printing, setting and distributing Dec. 31, 1889	406,341	Douse, T. R	Fire extinguishers, chemical	July 2, 1889
412,606 Dow, L Printing, setting and distributing Oct. 8, 1889 430,569 Dowst, S. M. and Hosmer, F. H Telephones, systems June 17, 1890 430,992 Drake, C. C Telegraphy, fire June 24, 1890 426,487 Drew, C. W. and Francis, E. R Heaters Apr. 29, 1890 418,664 Dreyer, W Printing, setting and distributing Dec. 31, 1889			Medical and surgical, body-wear	July 23, 1889
430,569 Dowst, S. M. and Hosmer, F. H Telephones, systems June 17, 1890 430,992 Drake, C. C Telegraphy, fire June 24, 1890 426,437 Drew, C. W. and Francis, E. R Heaters Apr. 29, 1890 418,664 Dreyer, W Printing, setting and distributing Dec. 31, 1889				
430,992 Drake, C. C Telegraphy, fire June 24, 1890 426,437 Drew, C. W. and Francis, E. R Heaters Apr. 29, 1890 418,664 Dreyer, W Printing, setting and distributing Dec. 31, 1889	430,569		Telephones, systems	June 17, 1890
418,664 Dreyer, W Printing, setting and distributing Dec. 31, 1889		Drake, C. C	Telegraphy, fire	June 24, 1890
		Drever, W. and Francis, E. K.	Printing setting and distributing	Dec. 31, 1889

No.	NAME.	CLASS.	DATE.
424,866	Dulait, J	Lights, are, gravity feed, gear-clutch	Apr. 1, 1890
428,669	Dummer, E	Electric locomotives	May 27, 1890
427,503	Duncan, L	Motors	May 6, 1890
409,736 408,468	D'Unger, R Dunlap, J. W., sr	Telephones, magnetic	Aug. 27, 1889 Aug. 6, 1889
414,860	Dunlap, W. A	Electro-deposition	Nov. 12, 1889
409,460	Dunn, F. M., Petticord, A. and King, J. H	Alarms	Aug. 20, 1889
414,686	Dunn, P. J.	Girders and columns	Nov. 12, 1889
429,608 i 430,633	Dyer, R. N	Lights, incandescent ————————————————————————————————————	June 10, 1890 June 24, 1890
409,026	Eaton, W. S.	Engraving machines	Aug. 13, 1889
408,224	Eddy, W	Telephones, calls	Ang. 6, 1889
425,568	Edelkamp, J	Batteries, thermal	Apr. 15, 1890
414,879 406,130	Edgecomb, D. W. and Terry, C. A	Annuuciators Lights, incandescent	Nov. 12, 1889 July 2, 1889
406,824	Edison, T. A	Meters	July 9, 1889
406,825	Edison, T. A	do	July 9, 1889
406,567 411,016	Edison, T. A	Telephones, details Lights, filaments and carbons	July 9, 1889 Sept. 17, 1889
411,017	Edison, T. A	do	Sept. 17, 1889
411,018	Edison, T. A	do	Sept. 17, 1889
411,019	Edison, T. A	Lights, incandescent	Sept. 17, 1889
411,020 420,594	Edison, T. A	Lights, filaments and carbons Telegraphy, quadruplex	Sept. 17, 1889 Feb. 4, 1890
422,072	Edison, T. A	Telegraphy, duadruplex	Feb. 25, 1890
422,073	Edison, T. A	Telegraphy, circuits and systems	Feb. 25, 1890
422,074 422,578	Edison, T. A	Telegraphy, duplex	Feb. 25, 1890
422,579	Edison, T. A	Telephones, relays and repeaters	Mar. 4, 1890 Mar. 4, 1890
425,760	Edison, T. A	Meters	Apr. 15, 1890
425,761	Edison, T. A	Lights, incandescent	Apr. 15, 1890
425,762 $425,763$	Edison, T. A Edison, T. A	Cut-outs, thermal Magueto-electric	Apr. 15, 1890 Apr. 15, 1890
430,275	Edison, T. A	Separators	June 17, 1890
430,279	Edison, T. A	Batteries, galvanic	June 17, 1890
430,280 $430,932$	Edison, T. A	Separators Lights, incandescent	June 17, 1890 June 24, 1890
430,933	Edison, T. A	Lights, filaments and carbons	June 24, 1890
430,934	Edison, T. A	Lighting, systems	June 24, 1890
431,018 422,577	Edison, T. A.	Mugneto-electric	June 24, 1890
428,583	Edison, T. A. and Gilliland, E. T. Egan, C. E. and Gray, H. F.		Mar. 4, 1890 May 20, 1890
413,438	Eggers, F. F		Oct. 22, 1889
428,900	Ehrlich, L	Indicators	May 27, 1890
417,009 413,337	Eickemeyer, J. C	Telephones, electric ————————————————————————————————————	Dec. 10, 1889 Oct. 22, 1889
413,338	Eickemeyer, R		Oct. 22, 1889
413,339	Eickemeyer, R	Batteries, secondary	Oct. 22, 1889
413,363 $422,511$	Eickemeyer, R		Oct. 22, 1889
422,511	Eickemeyer, R	Electro-magnets	Mar. 4, 1890 Mar. 4, 1890
430,310	Eisenhuth, J. W.	Air and gas engines, explosive	June 17, 1890
430,312	Eisenhuth, J. W	do	June 17, 1890
409,738 412,700	Elkins, W. H	Applications, generalRegulators	Aug. 27, 1889 Oct. 8, 1889
427,163	Elkins, W. H	do	May 6, 1890
427,164	Elkins, W. H	do	May 6, 1890
430,634 416,289	Elkins, W. H	Locomotion	June 24, 1890 Dec. 3, 1889
412,845	Ely, G. E	Telegraphy, circuit-closers	
423,229	Emery, S. S	Telegraphy, repeaters	Mar. 11, 1890
418,975 417,998	Emme, C. A.——————————————————————————————————	Door tells	Jan. 7, 1890 Dec. 24, 1889
429,377	Englisb, S. M		June 3, 1890
415,962	Enholm, O. A	Miscellaneous compositions	Nov. 26, 1889
415,963	Enholm, O. A	Batteries, galvanic	Nov. 26, 1889
421,916 425,999	Entz, J. B. and Phillips, W. A	Batteries, secondary	Apr. 22, 1890
408,600	Erickson, E. E	Lights, incandescent, special features	Aug. 6, 1889
427,062	Erickson, E. E	do	May 6, 1890
408,002 417,158	Ernst, V. H	Batteries, secondary	July 30, 1889
414,763	Estabrook, W. W	Igniting devices, automatic	
425,066	Etheridge, H	Telegraphy, automatic	Apr. 8, 1890
425,413 414,764	Etheridge, HEuphrat, F		Apr. 15, 1890
425,767		Locomotion	
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No.	Name.	CLASS.	DATE.
409,673	Everett, C	Medical and surgical, body-wear	Aug. 27, 1889
407,477	Ezell, F	Applications, general	July 23, 1889
425,768	Ezell, F	Dishes and plates	Apr. 15, 1890
413,250	Farciot, C. O	Compasses	Oct. 22, 1889
415,628 426,788	Farmer, M. G	Lamp-shades	Nov. 19, 1889 Apr. 29, 1890
426,789	Farmer, M. G.	do	Apr. 29, 1890
413,276	Farnham, I. H	Telephones, systems	Oct. 22, 1889
422,339	Farnham, I. H	Locomotion	Feb. 25, 1890
423,421	Farrall, T. D	Heaters	Mar. 18, 1890
420,444 409,178	Farrell, G	Cut-outs, thermal Batteries, secondary	Feb. 4, 1890 Aug. 20, 1889
429,895	Felt, G. H	Batteries, galvanic.	June 10, 1890
429,896	Felt, G. H	do	June 10, 1890
429,897	Felt, G. H	do	June 10, 1890
429,898 428,247	Felt, G. H	Manustic looks and helts	June 10, 1890
428,770	Fenner, W. W.	Magnetic locks and bolts Engraving machines	May 20, 1890 May 27, 1890
407,188	Field, S. D	Locomotion	
409,675	Field, S. D	Telegraphy, relays and sounders	Aug. 27, 1889
428,748	Fike, D. M. and Huffman, J	Railway signals	
418,868	Finck, J	Annunciators	
415,165 426,971	Finney, J. R	Locomotion Projectiles, blasting and fuses	
429,899	Firman, L. B	Railway signals	
413,504	Fisher, F. E.	Annunciators	Oct. 22, 1889
411,742	Fisk, A. B	Railway signals	Sept. 24, 1889
407,004	Fisk, N. S.	Telephones, supports	
406,829 406,830	Fiske, B. A.	Indicatorsdo	
418,510	Fiske, B. A.	do	
410,964	Fitch, A. S.	Magneto-electric, hand machines	Sept. 10, 1889
410,965	Fitch, A. S	Magneto-electric	Sept. 10, 1889
410,966	Fitch, A. S	do	Sept. 10, 1889
430,010	Flad, H	Conductors, undergroundInsulators	Oct. 1, 1889
408,607	Flint, F. W	Electrodes	Aug. 6, 1889
422,196	Flora, E. E. and Hoy, P. R	Lights, incandescent, special features	
421,394	Foley, J. S	Telegraphy, railway-car	
415,629	Foote, G. L	Telegraphy, fire	
410,586 $427,259$	Forbes, G	Batteries, secondary, applications Magneto-electric	Sept. 10, 1889 May 6, 1890
415,710	Fowler, F. E	Locomotion	
415,504	Fowler, G	Insulators	Nov. 19, 1889
417,013	Fowler, H. E	Heaters	
428,084 418,559	Frager, A	Meters do	May 20, 1896 Dec. 31, 1889
411,496	Fraley, G. B	Locomotion	Sept. 24, 1889
426,563		Induction coils	
421,396		Cut-outs, thermal	
423,600	Frei, G. A	Galvanometers	Mar. 18, 1890
416,406 418,560	Frith, F. W	Railway signals	Dec. 3, 1889 Dec. 31, 1889
422,201		Motors, reciprocating	Feb. 25, 1890
423,680	Fuller, J. A	Water gages, float	Mar. 18, 1890
410,545	Furlong, L. F	Cut-outs, thermal	Sept. 3, 1889
430,846 428,087	Gannert, E. F.	Lights, incandescent, special features Electro-deposition	June 24, 1890 May 20, 1890
428,810	Garrett, D	Annunciators	
430,735	Garsed, R. P	do	June 24, 1890
425,068		Galvanometers	
425,069	Garver, M. M	do	Apr. 8, 1890
426,992 406,897	Garver, M. M Gaynor, T. F	Cut-outs, mechanical	
408,968	Gaynor, T. F	Bells	
411,805	Gaynor, T. F	Iron structures	Oct. 1, 1889
414,695	Gaynor, T. F	Applications, tools and machines	Nov. 12, 1889
423,753	Geigenhäper H	Alarms, burglar	Nov. 19, 1890
414,900 426,932	Geisenhöner, H	Magneto-electricBatteries, galvanic	Apr. 29, 1890
413,442	Gennert, E. F	Lights, incandescent, special features	Oct. 22, 1889
426,121	Gennert, E. F	do	Apr. 22, 1890
413,340	Gerry, J. H	Clocks, electric	Oct. 22, 1889
	Gibbs, W. E	Dental instruments	May 6, 1890
427,070		Applications tools and machines	Oct 8 1880
427,070 412,332 412,333	Gibson, W. P.	Applications, tools and machinesdo	Oct. 8, 1889

No.	NAME.	CLASS.	DATE.
409,189	Gilfillan, A. W	Indicators	Aug. 20, 1889
430,636	Gill, E. R., jr	Telephones, calls	June 24, 1890
430,637	Gill, E. R., jr.	Railway signals	June 24, 1890
406,041 410,886	Gill, J. C	Insulators	July 2, 1889 Sept. 10, 1889
418,120	Gillett, W	Magneto-electric, hand machines	Dec. 24, 1889
424,057	Gilman, C. C	Conductors, underground	
415,864	Gilson, S. H	Insulating materials	
429,129	Ginochio, N. B	Telephones, magnetic	
419,766	Glasser, A	Magnetic locks and bolts	Jan. 21, 1890
428,750 428,751	Glass, L. and Arnold, W. S. Glass, L. and Arnold, W. S.	Vending apparatusdodo	May 27, 1890 May 27, 1890
416,779	Gleason, E. P.	Fire-engines, stationary	Dec. 10, 1889
425,777	Godfrey, W. L	Magnetic locks and bolts	
.428,772	Goldshmidt, P	Cordage, warping	May 27, 1890
417,018	Goodridge, W. M	Telephones, systems	Dec. 10, 1889
414,399	Goodson, G. A	Printing, matrix-making	
414,400 414,637	Goodson, G. A.	Applications, tools and machines	Nov. 5, 1889 Nov. 5, 1889
427,680	Goodson, G. A	Type-writing	
427,681	Goodson, G. A.	Printing, matrix-making	May 13, 1890
410,410	Goodwin, C. Q	Conductors, lead-covered	Sept. 3, 1889
414,308	Goucher, A. A.		
409,574	Gould, C. C		Aug. 20, 1889
422,765 421,567	Grah, W., jr	Magnetic locks and bolts	
408,383	Graham, C. G	Insulators	Aug. 6, 1889
409,146	Grassler, W. F	Railway signals	Aug. 13, 1889
408,709	Gray, W	Telephones, systems	Aug. 13, 1889
426,266		do	
415,324	Green, L. R	Bridges, girders and columns	Nov. 19, 1889
415,325 $425,071$		do	
429,030		Fire-arms, sights	
427,984	Griffin, C. M		
421,398	Griffin, P. H	Locomotion	Feb. 18, 1890
425,570	Griggs, A. C.		
419,0 1 3 406,439	Grimley, C. H		
406,833	Griscom, W. W		
407,006	Griscom, W. W.		
408,231	Griscom, W. W.	Locomotiou	Aug. 6, 1889
408,232	Griscom, W. W		
408,233	Griscom, W. W.		
11,067 $406,726$	Greewith H	Batteries, galvanic	Inly 0 1880
412,177	Groswith, H	Motors	
428,481		·do	
420,198	Guerrant, G. M.	Lighting, systems	Jan. 28, 1890
428,482	Guss, O. G	Alarms	May 20, 1890
414,043 419,660	Gutmanu, L	Regulators Systems of distribution Systems of distribution	Oct. 29, 1889
419,661		Magneto-electric	Jan. 21, 1890
419,662		Systems of distribution	
419,663	Gutmann, L	do	Jan. 21, 1890
419,664		Motors, alternating	
423,552 423,553		Locomotion	
424,606	Gutmann, L	Regulators, alternating Systems of distribution	Apr. 1, 1890
426,269	Gutmann, L	Locomotion	Apr. 22, 1890
427,986	Gwynn, J. W	Street lamps	May 13, 1890
427,762	Haas, J., jr.	Railway signals	May 13, 1890
426,009	Hadlock, W. E	Indicators	Apr. 22, 1890
410,276 420,057	Height H I	Telegraphy, relays and soundersIndicators	Sept. 3, 1889
413,782	Hall, A. W	Telephones, mechanical	Oct. 29, 1889
420,936	Hall, O. S	Medical and surgical, body-wear	Feb. 11, 1890
415,168	Hambery, J. T	Railways, interlocking	Nov. 12, 1889
418,125	Hamblet, J	Clocks, electric	Dec. 24, 1889
422,773	Hamilton, C. J	Annunciators	Mar. 4, 1890
425,507 428,046	Hanagin, J. A	Cnt-outs, mechanical	May 13 1800
416,604	Hansen, M. L	Meters	Dec. 3, 1889
416,605	Hansen, M. L	Batteries, secondary	Dec. 3, 1889
		Cut outs sleetes manualis	3.5 4 1000
422,524	Happoldt, M. C.	Cut-onts, electro-magnetic	Mar. 4, 1890
	Harriman, W. F	LocomotionApplications, tools and machines	May 13, 1890

No.	Nine	CTAGG	Diame
No.	NAME.	Class.	Date,
428,095	Hart, O. W	Annunciators	May 20, 1890
416,103	Harter, G. A	Magnetic locks and bolts	Nov. 26, 1889
422,300	Hartmann, C. J	Batteries, secondary	Feb. 25, 1890
422,301 411,551	Hartmann, C. J	Regulators	Feb. 25, 1890 Sept. 24, 1889
424,110	Harris, S.	Locomotion	Mar. 25, 1890
414,883	Harrison, E. L	Alarms	Nov. 12, 1889
414,310	Haskins, C. D. and Scribner, C. E	Telephones, systems	Nov. 5, 1889
412,089	Hawkes, T. G	Reflectors Locomotion	
419,771 422,591	Hawkesworth, R. W. Hayden, W. W. and Dickeman, C. S.	Drop-lights and hangers	
428,774	Hayward, E. and Sims, E. S.	Alarms, burglar	
424,062	Hazard, R. R.	Railway cars, trucks	
414,155	Head, C. B	Telegraphy, fire, alarms and extinguishers	
422,302 423,317	Head, H. H. and Saunderson, L Heald, A	Lights, filaments and carbons Gas burners, incaudescent	
407,480	Healy, C. L	Telegraphy, relays and sounders	
407,729	Healy, C. L	Telegraphy, printing	
407,730.	Healy, C. L	dodo	July 23, 1889
418,284 430,645	Healy, C. L Heath, J	Telegraphy, quadruplex Lights, incandescent, special features	Dec. 31, 1889
408,879	Hedbavny, A	Furs and pelts	Aug. 13, 1889
428,604	Heisler, C	Lights, filaments and carbons	May 27, 1890
411,380	Heller, F. G. A	Cut-outs, thermal	Sept. 17, 1889
418,718	Henning, B. S.	Locomotion	Jan. 7, 1890
424,298 426,379	Henry, J. C	do	Mar. 25, 1890
426,380	Henry, J. C	Motors	Apr. 22, 1890
429,272	Hering, C	Batteries, secondary	June 3, 1890
429,273	Hering, C	do	June 3, 1890
429,274 429,912	Hering, C	do	
429,913	Hering, C	do	June 10, 1890 June 10, 1890
429,914	Hering, C	do	June 10, 1890
415,182	Hess, A. T		Nov. 12, 1889
421,169	Hewett, E. M. G		Feb. 11, 1890
412,885 426,724	Heyl, G. E.	Telephones, electric Batteries, secondary	Oct. 15, 1889 Apr. 29, 1890
421,048	Heymann, E. and F. W	Regulators	Feb. 11, 1890
427,571	Heymann, E. and F. W	Regulators, alternating	May 13, 1890
419,673	Hicks, T. H	Locomotion	Jan. 21, 1890
420,300 426,499	Hicks, T. H	Electrodes	Jan. 28, 1890
407,204	Higham, D.	Systems of distribution	Apr. 29, 1890 July 16, 1889
407,293	Higham, D.	Regulators	
409,463	Higham, D	Magneto-electric	Aug. 20, 1889
407,660	Hill, C. F	Lightning rods	
424,786 406,906	Hill, E. A	Medical and surgical, body-wear Cut-outs, mechanical	Apr. 1, 1890
426,381	Hinds, C. H	Igniting devices, manual	Apr. 22, 1890
407,931	Hirlimann, C. J	Batteries, galvanic	July 30, 1889
411,030	Hirlimann, C. J	Motors	Sept. 17, 1889
413,058 430,075	Hirsch, L Hitchcock, C. A	Applications, general Batteries, galvanic	
413,279	Hochhausen, W	Regulators	
413,280	Hochhausen, W	do	
416,611	Hochhausen, W	Lighting, systems	Dec. 3, 1889
416,612	Hoffmann P		
410,896 425,572	Hoffmann, R		
420,384	Holcombe, A. G		
430,804	Hollerith, H	Indicators	June 24, 1890
407,593	Hollings, J. C	Chandeliers	July 23, 1889
410,689 419,674	Hollings, J. C	Lights, incandescent, special features	
422,216	Höllingshead, W. B	Batteries, secondary	
427,513	Hollingshead, W. B	Electro-deposition	May 6, 1890
422,592	Holman, F	Lamp shades	Mar. 4, 1890
429,447 427,514	Holmes A. P. and W. A.		
409,968	Holmes, A. B. and Gale, G. F	Lights, sockets and keys Medical and surgical, body-wear	May 6, 1896 Aug. 27, 1889
418,871	Holt, G. A	Indicators	Jan. 7, 1890
	Hopkinson, J.	Systems of distribution	Nov. 5, 1889
414,541			
412,185	Hopkinson, J. and E	Regulators, alternating	
		Regulators, alternating	Oct. 1, 1889

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No.	Name.	CLASS.	DATE,
420,070	Howey, W. J.	Alarms, burglar	Jan. 28, 1890
422,885	Hoyt, A. H	Induction coils	Mar. 4, 1890
419,524 421,498	Huber, J. H. Hubinger, J. C.	Lamp shades ————————————————————————————————————	Jan. 14, 1890 Feb. 18, 1890
421,499	Hubinger, J. C	do	
408,484	Huebner, L. and Busse, R.	Magnetie loeks and bolts	
411,124	Huestis, F. W	Batteries, seeondary	
418,369	Huff, G. E	Conductors, insulators	
413,512 407,210	Hull, R. C	MotorsLighting, systems	
417,188	Hunter, J. H	Railway signals	
413,604	Hunter, R. M	Loeomotion	Oct. 22, 1889
414,049		do	
414,050	Hunter, R. M	do	Oet. 29, 1989
417,920 418,893	Hunter R. M	Loeomotion	Jan. 7, 1890
424,206	Hunter, R. M	do	Mar. 25, 1890
424,207	Hunter, R. M	do	Mar. 25, 1890
424,607	Hunter, R. M	do	Apr. 1, 1890
424,928	Hunter, R. M	do	Apr. 1, 1890
425,076 $425,077$	Hunter, R. M	do	Apr. 8, 1890 Apr. 8, 1890
425,883	Hunter, R. M	do	Apr. 15, 1890
426,382	Hunter, R. M	do	Apr. 22, 1890
427,515	Hunter, R. M	Systems of distribution	
428,098 428,210	Hunter, R. M	LocomotionElectric locomotives	
428,211	Hunter, R. M	Loeomotion	
429,025	Hunter, R. M	Railways, systems, conduit	
429,093	Hunter, R. M	Railways, systems, overhead	
429,094	Hunter, R. M	Motors, alternating	
429,687 430,076	Hunter, R. M	LocomotivesRailways, systems, eircuits, multiple are	June 10, 1890
430,208	Hunter, R. M	do	June 17, 1890
430,580	Hunter, R. M	Railways, systems, overhead, trolleys	June 17, 1890
406,168	Hussey, C. A	Batteries, galvanie	July 2, 1889
406,169 $414,220$	Hussey, C. A	do	July 2, 1889 Nov. 5, 1889
414,317	Hussey, C. A	do	Nov. 5, 1889
414,318	Hussey, C. A	do	
413,281	Hussey, M. L. M	Clocks, electric	
411,595	Hylaud, D. M	Conductors, underground	
411,443 425,078	Hyman, D	Annuneiators	
429,033	Ide, F. F	Applicatious, general	May 27, 1890
414,052	1mmich, M	Regulators	Oct. 29, 1889
427,235	Ingraham, A. A	Motors	
428,917 419,774	Ingraham, A. A	Electric loeomotivesBatteries, galvanie	May 21, 1890
429,172		Lights, incandescent	June 3, 1890
430,128	Irwin, J. H	Telephones, electric	June 17, 1890
411,989		Loeomotion	
415,641 422,219		RegulatorsAir and gas pumps, pneumatie	
426,384		Veloeipedes	
428,723		Drop-lights and hangers	
416,920	Jenkins, W. F	Locomotion	Dec. 10, 1889
428,564		Cut-outs, thermal	
410,670 417,487		Magneto-electrie	
422,419		Magneto-electric	
424,065	Jenney, C. D	do	Mar. 25, 1890
409,104	Jennings, B	Loeomotiou	Aug. 13, 1889
406,284 411,198		Conductors	
420,804	Johnson, D. E	Telegraphy, transmitters	
418,843	Johnson, D. E	do	
425,801	Johnson, F	Lighting, systems	Apr. 15, 1890
420,234	Johnson, G. A	Batteries, seeondary	Jan. 28, 1890
412,095 415,110	Johnson, I. La R		
411,448		Gas stoves	
410,592		Magneto-electric	
416,366	Johnson, T. L	Locomotion	Dec. 3, 1889
423,324		Batteries, secondary	
412,758 420,906		Telegraphy, eireuit-elosersBatteries, seeondary, applications	
120,000	V VARANÇUM 11 1 10	appronting, appronting	200. 1, 2000

No.	_ Name.	Class.	DATE.
419,776	Jones, A. B		Jau. 21, 1890
424,209	Jones, F. W.		Mar. 25, 1890
425.511 426.591	Jones, F. W	Telegraphy, keys	
426.519	Jones, F. W.	do	Apr. 29, 1890
427,873	Jones, J. W	Alarms	May 13, 1890
416,368	Jordan, L. F	Drop-lights and hangers	
418,134 429,133	Julian, H. F.——————————————————————————————————		
415,274	Kane, H. H		Nov. 19, 1889
428,676	Karr, H. C	Clocks, electric	May 27, 1890
424,295	Kaslan, J. P	Knitting and netting, stopping	Mar. 25, 1890
427,876 416,169	Kaylor, J. S	Telegraphy, keysRegulators	May 13, 1890
429,573		Lights, arc, gravity feed, gear-clutch	
424,310	Kellogg, M. G	Telephones, systems	
427,087	Kellogg, M. G	do	May 6, 1890
407,014	Kelly, J. F. and Brangs, P. H	Regulators	July 16, 1889
422,802 430,387	Kennedy I C	Inhalers and respiratorsApplications, general	June 17 1890
415,327		Batteries, secondary	
407,294	Kennedy, R.	Systems of distribution	July 16, 1889
11,031	Kennedy, R	do	Sept. 24, 1889
419,264 410,976	Kennelly, A. E.	MetersElectrolysis	Jan. 14, 1890 Sopt 10, 1880
415,644	Kerner, G. and Marx, J	do	Nov. 19, 1889
412,924	Kester, J. F	Applications, general	Oct. 15, 1889
422,948	Kilbourn, W. H	Applicatious, tools and machines	Mar. 11, 1890
422,803		Alarms	
425,101 427,578	Kilian, C. J	LocomotionConductors, supports and insulators	
407,077	Kimball, J. L. and Wirt, H. C.	Lights, incandescent, special features	
411.041	King, A. S. and Swaney, W. H		
412,854	Kingdon, J. A	Magneto-electric	
407,895	Kinsman, F. E	Lighting, systems	
411,287 412,925	Kinsman, F. E	Lights, arc, gravity feed, gear-clutch Transmission of power	
426,127	Kintner, C. J	Systems of distribution	
411,150	Kissell, A. S	Valve-controllers	
427,237	Kissell, A. S.	Cut-onts, electro-magnetic	
415,871 406,916	Kissell, M. A. and A. S. Kitsee, I.	Valve-controllers Batteries, secondary	
419,588	Kitsee, I	Loconiotion	
430,960	Kitsee, I	Telephones, systems	June 24, 1890
426,941	Kleber, O	Telegraphy, keys	Apr. 29, 1890
411,452 426,189	Klein, P. H., jr	Cut-outs, thermal	Sept. 24, 1889 Apr. 22, 1890
417,923	Knepper, F. J	Induction coils	Dec. 24, 1889
406,917	Knight, W. H	Locomotion	
406,743	Knight, W. H	do	
424,887	Knight, W. H	do	Apr. 1, 1890
424,888 425,950	Knight, W. H	do	Apr. 1, 1890 Apr. 15, 1890
428,169	Knight, W. H	Motors	May 20, 1890
11,083	Knight, W. H	Railways, systems, circuits, multiple arc	June 10, 1890
11,084	Knight, W. H.	Railways, systems, conduits	
408,016 408,017	Knowles, E. R.	Metersdo	July 30, 1889 July 30, 1889
408,018	Knowles, E. R.	do	July 30, 1889
408,182	Knowles, E. R	Alloys	July 30, 1889
409,207	Knowles, E. R	Galvanometers	Aug. 20, 1889
425,615	Knudson, A. A	Insulating materials	Apr. 15, 1890
411,042 406,354	Kolle, H. W	MetersBatteries, secondary, applications	Sept. 17, 1889 July 2, 1889
407,781	Kookogey, W. P	Batteries, galvanic	July 30, 1889
408,112	Kookogey, W. P.	Batteries, secondary	July 30, 1889
408,629	Kookogey, W. P.	Batteries, galvanic	Aug. 6, 1889
409,106 409,291	Kookogey, W. PKookogey, W. P	Batteries, secondaryBatteries, galvanic	Aug. 13, 1889 Aug. 20, 1889
410,111	Kookogey, W. P	Batteries, secondary, applications	Aug. 27, 1889
413,345	Kookogey, W. P.	Batteries, galvanic	Oct. 22, 1889
414,645	Kookogey, W. P	Railway signals	Nov. 5, 1889
414,773 421,586	Kookogey, W. P	Lights, sockets and keys	Nov. 12, 1889 Feb. 18, 1890
422,533	Kookogev, W. P.	Batteries, secondary	Mar. 4, 1890
425,135	Kookogey, W. P	Batteries, galvanic	Apr. 8, 1890
425,513	Kookogey, W. P.	Insulators	Apr. 15, 1890

No.	Name.	Class.	DATE.
427,429	Koyle, C. H. and Lattig, J. W	Railway signals	May 6, 1890
427,430	Koyle, C. H. and Lattig, J. W	do	May 6, 1890
426,452	Kuehule, J	Locomotion	Apr. 29, 1890
422,082	Ladd, H. W	Telephones, mechanical	
416,732 411,153	La Dow, O. D Lafferty, S. C	Telegraphy, transmitters	Dec. 10, 1889 Sept. 17, 1889
415,817	Lane, F. A	Clocks, electric	Nov. 26, 1889
417,926	Lane, F. A	Bells	Dec. 24, 1889
417,927	Lane, F. A	Clocks, electric	Dec. 24, 1889
417,928	Lane, F. A	Annunciators	Dec. 24, 1889
427,879 419,962	Lane, G. M	Lights, incandescent, special features	May 13, 1890 Jan. 21, 1890
419,967	Lane, G. M	do	Jan. 21, 1890
428,008	Lange, P	Lights, arc, gravity feed, gear-clutch	May 13, 1890
420,881	Langhans, R	Lights, filaments and carbons	Feb. 4, 1890
406,172 425,435	Lannert, J. A La Roche, F. A	Magneto-electric	July 2, 1889
414,668	Laughton, W.	Medical and surgical, body-wear	Apr. 15, 1890 Nov. 5, 1889
416,682	Laurence, W. B.	Lamp shades	Dec. 3, 1889
409,470	Lawrance, G. McG	Electrodes	Aug. 20, 1889
419,617	Lawton, C. H	Lights, sockets and keys	Jan. 14, 1890
421,864 416,632	Layng, W. HLcber, L. H	Lights, incandescent, special features Lights, incandescent	Feb. 18, 1890 Dec. 3, 1889
415,915	Lee, C. E	Annunciators	Nov. 26, 1889
406,223	Lee, J. E	Batteries, galvanic	July 2, 1889
428,499	Legg, J. B. and Nile, J	Locomotion	
417,052	Leibnitz, F. E	Indicators	
422,811 409,689	Lemaire, P. C. J	Chandeliers Telegraphy, lightning arresters	
410,168	Lemp, H	Lights, filaments and carbons	Sept. 3, 1889
416,339	Lemp, H	Meters	Dec. 3, 1889
420,077	Lemp, H	Lights, sockets and keys	
421,177 428,616	Lemp, H	Cut-outs, electro-magnetic ————————————————————————————————————	
428,617	Lemp, H	do	May 27, 1890
428,618	Lemp, H	Inductoriums, transformers, stationary	
428,619	Lemp, H	Heaters	
428,620	Lemp, H. and Moody, N. S	Regulators, alternating	May 27, 1890
418,198 420,882	Lemp, H. and Thomson, E.————————————————————————————————————	Heaters	
414,418	Leonard, H. W	Car-brakes	
430,865	Leonard, H. W	Galvanometers	
414,714 427,333	Leonard, M. B	Heaters	
418,373	Lewis, W. FLibbey, H. W	Locomotiondo	May 6, 1890 Dec. 31, 1889
421,006	Libbey, H. W	Telephones, magnetic	
411,200	Lichner, F. M	Mining machines	Sept. 17, 1889
421,733	Liedke, E. L	Lights, filaments and carbons	Feb. 18, 1890
407,485 408,887	Lighthipe, J. ALighthipe, J. A	Systems of distribution————————————————————————————————————	Aug 13 1889
424,929	Lindenau, E. W	Clocks, electric	
423,874	Lineff, A. L	Locomotion	
429,277	Lineff, A. L	do	
422,534 421,179	Linville, J. H	Batteries, galvanic	Mar. 4, 1890
421,179	Little, E. W	Cut-outs, mechanicalCut-outs, thermal	Feb. 11, 1890
414,422	Lockwood, J. E	Galvanometers	
429,727	Lodge, A. J	Telegraphy, lightning arresters	June 10, 1890
417,055	Logan, C. H	Batteries, secondary	
415,363 407,225	Loomis, C. P	Magneto-electric	
410,170		Regulators	
412,962	Loomis, O. P	Lights, sockets and kevs	Oct. 15, 1889
424,562	Loomis, O. P	Telegraphy, lightning arresters	Apr. 1, 1890
424,563		Batteries, galvanic	
406,656 408,984		Locomotion Locomotion	
424,891	Lowrie, W., Hall, C. J. and Kollé, H. W	Mcters	Apr. 1, 1890
417,258	Lov, I. W. and O'Toole, R	Railway signals	Dec. 17, 1889
428,174	Ludwig, J. C	Telephones, magnetic	
416,635	Lyon E H	Igniting devices, automatic Telephones, electric	Dec. 3, 1889 Dec. 3, 1889
421,294	Lyke, N	Medical and surgical, baths	Feb. 11, 1890
412,639	Lyte, F. M	Batteries, secondary	Oct. 8, 1889
422,308	Lyte, F. M	do	Feb. 25, 1890
428,116 426,621	MacDonald, A. J	Batteries, galvanic	May 20, 1890
120,021	Tarabolisto, O. C		11p1. 20, 1000

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No.	NAME.	CLASS.	DATE.
428,050	Macloskie, C. H	Lighting, systems	May 13 1890
424,012	MacMaster, M. A	Electrodes	
429,199	Macquesten, W. D	Railways, systems, overhead	
429,314	Macquesten, W. D	Electric locomotives	June 3, 1890
429,315 429,316	Macquesten, W. D	Conductors, supports and insulators	
412,928	Macrae, R	Regulators	
426,832	Madden, J	Telegraphy, fire, alarms and extinguishers	Apr. 29, 1890
422.604	Mahnken, H	Telegraphy, printing	Mar. 4, 1890
430,868	Mailloux, C. O		
407,086 407,093	Main, W.	Locomotion	July 16, 1889
407,094	Main, W	do	July 16, 1889
407,095	Main, W		
417,259	Main, W	do	Dec. 17, 1889
422,956 423,616	Malmborg, E. R	Valve-controllersInduction coils	Mar. 11, 1890
423,617	Manker, C. W. and G. F	do	Mar. 18, 1890
406,922	Mansfield, G. W	Motors	July 16, 1889
424,070	Mansfield, G. W	Locomotion	
427,589	Marks, H. A	do	
407,896 407,938	Marquard, F	Insulating materialsdo	
406,751	Martenot, F	Valve controllers	
425,576	Martin, M	Telegraphy, fire	
419,861	Marvin, H. N	Transmission of power	
420,079 420,080	Marvin, H. N	Motors, alternating Transmission of power	Jan. 28, 1890 Jan. 28, 1890
420,816	Marvin, H. N	do	
429,729	Marvin, H. N	do	June 10, 1890
429,730	Marvin, H. N		June 10, 1890
429,731	Marvin, H. N	do	June 10, 1890
429,732 425,335	Marvin, H. N	Batteries, galvanic	June 10, 1890 Apr. 8, 1890
406,364	Mason, C. T	Watch balances	
428,684	Mason, J. H	Batteries, galvanic	May 27, 1890
407,487	Maxim, H. S	Operating ordnance	
423,788 417,392	Maxwell, G. S.		
417,436	Mayer, E. L. and Liepmann, H	Batteries, galvanic	
425,038	Maynadier, J. E	Locomotion	
411,900	McCahey, J	Covering cord	Oct. 1, 1889
411,749	McCarthy, L	Insulators	Sept. 24, 1889
413,146 428,854	McCarthy, L	Time-alarms	
424,993	McClner, C. E	Telephones, systems	
429,576	McCoy, A. T	Telegraphy, printing	June 3, 1890
429,577	McCoy, A. T	do	June 3, 1890
423,487 415,252	McCullough, G. C.——————————————————————————————————	Telegraphy, fire	Mar. 18, 1890
412,528	S.F. TO 21 NET S.F.	Locomotion	
413,409		Railway signals	
413,410	McElrov, D. S	do	Oct. 22, 1889
413,411	McElroy, D. S	Electro-magnets	Oct. 22, 1889
413,412 417,438		Railway signals	
420,693	McElroy, D. S	Car brakes	Feb. 4, 1890
409,752	McElroy, W. J	Locomotion	Aug. 27, 1889
423,488		Cut-outs, mechanical	
415,417 412,889	McHhenny, R. J	Telegraphy, repeaters	Nov. 19, 1889
412,559	McIntire, C	Connectorsdo	Feb. 25, 1890
407,490		Indicators	
407,414	McKinney, W	Meters	July 23, 1889
424,338	McKinney, W	do	Mar. 25, 1890
406,291 406,292	McLaughlin I E	Type-writing	July 2, 1889
406,293	McLaughlin, J. F	Bells-	July 2, 1889
406,294	McLaughlin, J. F.	do	July 2, 1889
408,666	McLaughlin, J. F.	Batteries, secondary	Aug. 6, 1889
409,613	McLaughlin, J. F	Type-writing	Aug. 20, 1889
410,007 413,083	McLaughlin J. F	Batteries, secondary Telephones, switch-boards	Aug. 21, 1889
416,847		Lights, arc, special features	
420,240	McLaughlin, J. F	Telegraphy, printing	Jau. 28, 1890
424,339	McLaughlin, J. F	Telegraphy, printingBatteries, secondary, applications	Mar. 25, 1890
424,340	McLaughlin, J. F.	Locomotion	Mar. 25, 1890

No.	Name.	Class.	DATE.
424,809	McLaughlin, J. F	Batteries, secondary	Apr. 1, 1890
424,810	McLaughlin, J. F	Locomotion	Apr. 1, 1890
425,818	McLaughlin, J. F	Batteries, secondary	Apr. 15, 1890
425,819	McLaughlin, J. F	do	Apr. 15, 1890
427,785	McLaughlin, J. F.	do	May 13, 1890
428,175	McLaughlin, J. F	Electric locomotives	
428,934	McLaughlin, J. F	Cut-outs, mechanical	
428,935	McLaughlin, J. F	Cut-outs, electro-magnetic	May 27, 1890
429,049	McLaughlin, J. F.	Metal working, miscellaneous	
429,359	McLaughlin, J. F	Type-writing	
429,360	McLaughlin, J. F.	Time checks	
409,646 416,483	McLellan, J. M.——————————————————————————————————	Magneto-electric	
426,304	McMahon, J. P	Telegraphy, fire, alarms and extinguishers	
414,866	Mehren, J. F	Galvanometers	
419,862	Mehren, J. F		
421,081	Mehren, J. F	Batteries, galvanic	Feb. 11, 1890
428,280	Mehren, J. F.	Meters	
407,673	Mellon, J. S	Medical and surgical, body-wear	July 23, 1889
412,196	Mellon, J. S	do	
420,884	Mercadier, E. J. P	Telegraphy, multiplex	
409,852	Merrill, J. S.	Drop-lights and hangers	Aug. 27, 1889
408,809	Meserole, A. V	Batteries, secondary	
409,996	Meyer, M	Thermostats	Aug. 27, 1889
427,341	Meyers, H. J	Magnetic locks and bolts	May 6, 1890
417,931	Mratt, G. W	Games and toys	Dec. 24, 1889
421,594		Mining machines	
423,385		Alarms	
423,527	Miller, G. B.	Locomotion.	Mar. 18, 1890
430,967	Millor I I	Cut-outs, thermal	June 24, 1000
426,134 407,101	Milliken, G. F		
412,971	Milliken, G. F	Telegraphy, fire	
410,555		Printing, tickets	
421,185	Miner, W. M.	Heaters	
413,287	Mitchell, J		
418,041		Separators	
416,006	Moennich, P		
411,899	Moffatt, R. R.	Separators	Oct. 1, 1889
409,364	Molyneaux, B. S	Vending apparatus	Aug. 20, 1889
409,366	Mond, L. and Langer, C	Batteries, secondary	Aug. 20, 1889
409,365	Mond, L. and Langer, C		
415,877	Mont-Ross, J. A	Paper manufactures, feeding	Nov. 26, 1889
423,335	Moorthamers, L		Mar. 11, 1890
425,143		Alarms, burglar	
428,688 415,345	Morehead, J	Alarms Batteries, galvanic	
414,868	Morgan F F	Telegraphy, fire	Nov. 19, 1009
427,783		Railway signals	
417,497		Cut-outs, mechanical	
408,503		Loconiotion	
428,929		Drop-lights and hangers	
428,930	Morris, E. P	Conductor supports and insulators	May 27, 1890
408,986	Morris, H. G. and Salom, P. G	Batteries, secondary	Aug. 13, 1889
428,123	Morrison, D. B	Wire fences	May 20, 1890
413,261	Mozier, A. M	Railways, interlocking	Oct. 22, 1889
422,244	Muckle, M. R., jr. and Smith, T. C.	Conductors, underground	Feb. 25, 1890
409,489	Mungesser, P. P	Brick kilns	Aug. 20, 1889
409,490	Mungesser, P. P	do	Aug. 20, 1889
426,196	Munsie, J. F	Conductors, underground	Apr. 22, 1890
426,197	Mullsle, J. F	do	Apr. 22, 1890
426,198 426,199	Muncio T E	do	Apr. 22, 1890
426,199		Connectors	
426,200	Munsie J F	ConnectorsConductors, underground	Apr. 22, 1890
426,202	Munsie, J. F	Insulating materials	Apr. 22, 1390
426,203	Mansie, J. F	Insulating materials	Apr. 22, 1890
426,204	Munsie, J. F	Connectors	Apr. 22, 1890 Apr. 22, 1890
426,205	Munsie, J. F	Conductors, underground	Apr. 22, 1890
426,206	Munsie, J. F	do	Apr. 22, 1890
420,351	Music, G	Automatic devices	Jan. 28, 1890
430,675	Nelson, D. C. and Eaton, W. R.	Railways, systems, overhead, trolleys	June 24, 1890
	Neu, G. S	Valve-controllers	Oct. 8, 1889
412,529			
412,530	Neu, G. S	Railway signals	Oct. 8, 1889
412,530 11,019	Neu, G. S. Nevens, F. W.	Apparel, cutting	Oct. 8, 1889 Aug. 6, 1889
412,530	Neu, G. S. Nevens, F. W. Nevins, T. F.	Railway signals Apparel, cutting Batteries, secondary Telephones, details	Oct. 8, 1889 Aug. 6, 1889 May 13, 1890

No.	NAME.	Class.	DATE.
417.075	Newman, N	Igniting devices, automatic	Dec. 10, 1889
417,198	Newman, N	do	Dec. 10, 1889
425,106	Nichols, E. I	Motors	
406.231	Nicolaus, E. B.	Air-pumps, mercury	
419,059 412,115	Niles, H. B	Locomotion Thermostats	
422,614	Nolan, E. J	Type-writing	Oct. 1, 1889 Mar. 4, 1890
411,831	Nordenfelt, T	Ordnance, electric appliances	Oct. 1, 1889
417,501	Norton, H. L. and Cooke, F. W	Time checks	Dec. 17, 1889
430,252	Norton, J. A	Cut-outs, mechanical	
426,049	Norton, J. P	Pottining relyania	
428,781 420,954	Nowotny, J. S. Nutting, S. E.	Battèries, galvanicApplications, general	May 27, 1890 Feb. 11, 1890
420,955	Nutting, S. E.	do	Feb. 11, 1890
421,053	Nntting, S. E	Regulators	Feb. 11, 1890
430,296	Oakman, S	Insulators	June 17, 1890
417,271	O'Connell, J. J	Telephones, systems	Dec. 17, 1889
420,091 $430,747$	O'Connell, J. J	do	Jan. 28, 1890 June 24, 1890
430,748	O'Connell, J. J		June 24, 1890
425,388	Odell, J. B	Locomotion	Apr. 8, 1890
422,616		Watch balances	Mar. 4, 1890
419,282		Heaters	
406,057	Ongley, C. E	Applications, tools and machines	July 2, 1889
410,180 410,181		Elevators	Sept. 3, 1889 Sept. 3, 1889
410,182	Ongley, C. E	Applications, tools and machines	Sept. 3, 1889
410,183	Ongley, C. E	do	Sept. 3, 1889
410,184		do	Sept. 3, 1889
429,318	Ongley, C. E	Telegraphy, fire, alarms and extinguishers	June 3, 1890
408,740 414,438	Opperman, A. F.	Lights, filaments and carbons Batteries, secondary	Aug. 13, 1889 Nov. 5, 1889
418,140	Osburn, H. G.	do	Dec. 24, 1889
408,130	Ostermann, H. and Lacroix, C	Alloys	July 30, 1889
415,975	Otto, G	Batteries, galvanic	Nov. 26, 1889
430,432 406,299	Oulton, J. and Edmondson, J.		June 17, 1890
424,995	Owen, E. A	Photography, combined apparatus————————————————————————————————————	July 2, 1889 Apr. 8, 1890
426,307	Paca, W. S	Annunciators	Apr. 22, 1890
417,787	Packard, J. W.	Lights, sockets and keys	Dec. 24, 1889
417,788	Packard, J. W.	do	Dec. 24, 1889
417,789 $426,055$	Packard, J. W	Lights, incandescent	Dec. 24, 1889 Apr. 22, 1890
412,657	Pain, R. W	Self-playing instruments	Oct. 8, 1889
417,680	Pain, R. W	Self-playing instruments, pneumatic	Dec. 17, 1889
427,480	Paine, A. T	Nautical signals	
422,968	Paine, W. J	Applications, tools and machines	Mar. 11, 1890
410,185 413,810	Page, W. N	Endless beltsSystems of distribution	Sept. 3, 1889 Oct. 29, 1889
408,042	Palmer, D. A	Telegraphy, fire	
410,013	Parcelle, A. L	Clocks, electric	Aug. 27, 1889
416,122	Park, W. R	Insulators	Nov. 26, 1889
425,625 422,147	Parker, E. A	ThermostatsCut-outs, mechanical	
422,148		Motors	
422,149	Parkhurst, E. B.	do	
421,508		Annunciators	
429,582	Parrish, H. A.	Railway signals	June 3, 1890
429,386 410,987	Patter F I	Electrolysis Motors, alternating	June 3, 1890 Sept. 10, 1889
410,988	Patten, F. J	do	
413,085	Patten, F. J	do	
418,652	Patten, F. J	Transmission of power	Dec. 31, 1889
418,653 418,654	Patten, F. J	Victors alternating	Dec. 31, 1889 Dec. 31, 1889
418.655	Patten, F. J	Motors, alternating Transmission of power	
427,606	Patten, F. J	Electro-magnets	May 13, 1890
428,221	Patten, F. J	Telegraphy, multiplex	
428,222 428,223	Patten, F. J	do	May 20, 1890
428,223	Patten, F. J	do	May 20, 1890 May 20, 1890
428,225	Patten, F. J	do	May 20, 1890
428.226	Patten, F. J	do	May 20, 1890
429,735	Patten, F. J	do	
426,057 $428,055$	Patterson, T	Cut-outs, thermalConductors, lead-covered	Apr. 22, 1890 May 13, 1890
430,297	Patterson, W. R	Conductors, lead-covered	June 17, 1890
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145,829 Payen, C. Batteries, secondary Nov. 19, 145,830 Payen, C. Batteries, secondary Nov. 19, 145,831 Payen, C. Batteries, secondary Nov. 19, 145,832 Payen, C. Batteries, secondary Nov. 19, 145,832 Payen, C. Batteries, secondary Nov. 19, 145,833 Payen, C. Lead Nov. 19, 145,834 Payen, C. Lead Nov. 19, 145,834 Payen, C. do Nov. 19, 145,83	No.	NAME.	CLASS.	DATE.
1415,339 Payen, C. Batteries, secondary Nov. 19, 1415,331 Payen, C. Batteries, secondary Nov. 19, 1415,332 Payen, C. Batteries, secondary Nov. 19, 1415,333 Payen, C. Meni founding in metal molbs Nov. 19, 1415,333 Payen, C. Lead Nov. 10, 1415,348 Payen, C.		Patton, W. H		Aug. 13, 1889
1415,333 Payen, C		Patton, W. H		Apr. 1, 1890
415,333 Payen, C. Batteries, secondary Nov. 19, 415,333 Payen, C. Metal founding in metal molds Nov. 19, 415,333 Payen, C. Batteries, secondary Nov. 19, 415,341 Payen, C. C. C. C. C. C. C. C.		Payen, C		Nov. 19, 1889
Metal founding in metal molds		Payen C		Nov. 19, 1889
1415,331 Payen, C. Batteries, secondary Nov. 18, 1415,344 Payen, C. C. C. C. C. C. C. C.		Payen, C	Metal founding in metal molds	Nov. 19, 1889
1415,343 Payen, C		Paven, C		
415,683 Payen, C.	415,347	Payen, C	Lead	Nov. 19, 1889
141,683 Yayen, C.		Payen, C		
428,942 Pawlowski, J.		Payen, C		Nov. 19, 1889
494,431 Pearce, F		Payen, C		
411,833		Pearce F	Telegraphy fire	Mar. 25, 1890
420,541 Peckham, E			Motors	Oct. 1, 1889
420,545 Peckham, E	420,543	Peckham, E		
495,627 Peckham, E				
18,850				
418,580 Pendleton, J. H., Bryson, A. J. and Tiers, C. Railway signals Jan. 7, 1425,107 Penney, H. E. Locomotion Apr. 8, 422,438 Pennock, G. B. Batteries, secondary, applications Mar. 4, 416,234 Perot, E. S. Conductors, underground Dec. 3, 416,235 Perot, E. S. Conductors, underground Apr. 1, 408,513 Perry, F. L. Systems of distribution Apr. 1, 408,513 Perry, F. L. Systems of distribution Apr. 1, 408,513 Perry, F. L. Systems of distribution Apr. 1, 408,785 Pfannkuche, G. Regulators July 30, 413,448 Pfannkuche, G. Magneto-electric Oct. 15, 428,317 Pfannkuche, G. Magneto-electric Oct. 29, 414,245 Pfannkuche, G. Regulators Oct. 29, 414,245 Pfannkuche, G. Regulators Oct. 29, 418,390 Pfannkuche, G. Railway cars, brakes Oct. 29, 418,491 Pfannkuche, G. Railway cars, brakes Oct. 29, 418,491 Pfannkuche, G. Railway cars, brakes Oct. 29, 419,417 Pfangst, L. Electric locomotives June 17, 419,000 Pfangst, L. Electric locomotives June 18, 419,000 Pfangst, L. Electric locomotives June 10, 419,000 Pfangst, L. Electric locomotives June 10, 429,738 Pfand, R. Magneto-electric June 10, 429,738 Pfand, R. Magneto-electric June 10, 429,739 Philippart, G. Electric locomotives June 10, 429,000 Philippart, G. Electric locomotives Apr. 15, 425,007 Philippart, G. Electric locomotives Apr. 15, 425,007 Philippart, G. Electric locomotives Apr. 16, 425,007 Philippart, G. Electric locomotion Apr. 16, 425,007 Philippart, G. Electric locomotion Ap			Locomotion	Apr. 15, 1890
425,107 Penney, H. E.				
16,235 Perot, E. S.		Penuock, G. B		
424,818 Perrey, F. A.	416,234	Perot, E. S.	Conductors, underground	Dec. 3, 1889
408,513 Perry, F. L		Perot, E. S		
407,875 Pfannkuche, G Regulators July 30, 141,3148 Pfannkuche, G Magneto-electric Oct. 15, 14,076 Pfannkuche, G Magneto-electric Oct. 29, 141,245 Pfannkuche, G Regulators May 20, Magneto-electric Nov. 5, 428,317 Pfannkuche, G Regulators May 20, Magneto-electric Pfanskuche, G Railway cars, brakes Oct. 29, 13,960 Pfingst, L Railway cars, brakes Oct. 29, Pfingst, L Electric locomotives June 17, 420,096 Pfingst, L Electric locomotives June 17, 420,096 Pfingst, L Registers Oct. 22, 429,735 Pforhelmer, J Registers Oct. 22, 429,735 Pfund, R. Magneto-electric June 10, Magneto-electric June 10, Magneto-electric June 10, Philippart, G Batteries, secondary Apr. 16, 425,907 Philippart, G Batteries, secondary Apr. 16, 425,907 Philippart, G Batteries, secondary Apr. 16, 425,907 Philippart, G Batteries, secondary Apr. 16, 413,629 Philipps, F A Medical and surgical, body-wear Dec. 10, 413,629 Philipps, E A Medical and surgical, body-wear Dec. 10, 413,629 Philipps, E A Medical and surgical, body-wear Dec. 10, 413,629 Philipps, E A Medical and surgical, body-wear Dec. 10, 413,629 Philipps, E A Medical and surgical, body-wear Dec. 10, 413,629 Philipps, E A Medical and surgical, body-wear Dec. 10, 413,629 Philipps, E A Medical and surgical, body-wear Dec. 10, 413,639 Philipps, E A Medical and surgical, body-wear Dec. 10, 413,639 Philipps, E A Medical and surgical, body-wear Dec. 10, 413,631 Philipps, E A Medical and surgical, body-wear Dec. 10, 413,631 Philipps, E A Medical and surgical, body-wear Dec. 10, 413,631 Philipps, E A Medical and surgical, body-wear Dec. 10, 413,631 Philipps, E A Medical and surgical, body-wear Dec			Locomotion	Apr. 1, 1890
Hay Pfannkuche, G			Systems of distribution	Aug. 6, 1889
144,076 Pfannkuche, G Magneto-electric Nov. 5, 428,317 Pfannkuche, G Magneto-electric Nov. 5, 428,317 Pfannkuche, G Regulators May 20, 429,583 Pfannkuche, G Regulators May 20, 413,960 Pfanskuche, G Inductoriums, transformers, stationary June 3, 421,967 Pfanskuche, M Magneto-electric Feb. 23, 413,960 Pfingst, L Electric locomotives June 17, 420,096 Pfingst, L Electric locomotives June 17, 420,096 Pfinger, C. A Telegraphy, lightuing arresters Jan. 28, 425,907 Pforheimer, J Registers Oct. 22, 429,736 Pfind, R Magneto-electric June 10, 410,180 Philap J. H Bells Sept. 3, 425,902 Philippart, G Magneto-electric June 10, 416,803 Philippart, G Magneto-electric June 10, 416,803 Philippart, G Magneto-electric June 10, 416,803 Philippart, F. A Medical and surgical, body-wear Dec. 10, 418,629 Phillips, W A Covering cord Oct. 22, 407,447 Philipps, E. H Conductors Goudactors Goudacto		Pfannkuche G	Magneto-electric	Oct 15 1889
1414_245			Galvanometers	Oct. 29, 1889
Pfannkuche, G		Pfannkuche, G		
Pfairst L Railway cars, brakes Oct. 29,	428,317	Pfannkuche, G	Regulators	May 20, 1890
143,960 Pingst, I		Pfannkuche, G		
Pfingst L		Pfatischer, M	Magneto-electric	Feb. 25, 1890
Pfluger, C. A				
143,207 Pforzheimer, J Registers Oct. 22, 229,736 Pfund, R Magneto-electric June 10, 10, 180 Phulau, J. H Bells Sept. 3, 425,902 Philippart, G Batteries, secondary Apr. 15, 146,803 Philippart, G do Apr. 15, 146,803 Philippart, G Apr. 16, 146,803 Philips, W. A Covering cord Oct. 22, 421,968 Philips, E. F Conductors Feb. 25, 407,447 Philips, E. H Couductors, underground July 23, 423,807 Pieper, H., fils Lights, are and incandescent Mar. 18, 409,498 Pierce, T. J Lights, incandescent, special features Aug. 20, 427,522 Platt, O. S. and Orford, J. M Cut-outs, mechanical May. 6, 427,523 Platt, O. S. and Orford, J. M Cut-outs, mechanical May. 6, 427,523 Platt, O. S. and Orford, J. M Automatic fans Feb. 11, 411,781 Poole, C. P Locomotion Oct. 29, 425,579 Popp, V Meters Apr. 15, 407,416 Porter, M. D Telegraphy, fire July 23, 425,782 Porter, M. D Telegraphy, fire July 24, 425,782 Porter, M. D Telegraphy, fire July 24, 425,782 Porter, M. D Telegraphy, fire July 24, 425,782 Porter, W. M. Annunciators Apr. 15, 425,782 Potter, S. M. and Morgan, H. E Motors Motors May. 27, 426,644 Powers, J. A Cut-outs, mechanical July 9, 418,472 Pratt, C. R Meters Dec. 10, 417,086 Pratt, C. R Meters Dec. 10, 417,086 Pratt, C. R Dec. 10, 400 De				
10,189		Piorzheimer, J	Registers	Oct. 22, 1889
Apr. 15, Apr. 16, Apr. 16,	429,736			June 10, 1890
425,957		Phalau, J. H	Bells	
Helical and surgical, body-wear Dec. 10,				
Hillips, W. A. Covering cord Oct. 22,		Philippart, G	Medical and apprical hadra wash	Apr. 15, 1890
221,968 Phillips, E. F Conductors Feb. 25, 407,447 Phipps, E. H. Couductors, underground. July 23, 423,807 Pieper, H., fils. Lights, are and incandescent Mar. 18, 423,873 Pieper, H., fils. Lights, incaudescent, special features Aug. 20, 429,058 Pierce, T. J. Conductors, supports and insulators. May 27, 423,697 Pinolet, L. M. Bells Mar. 18, 427,521 Platt, O. S. and Orford, J. M. Cut-outs, mechanical May 6, 427,522 Platt, O. S. and Orford, J. M. do May 6, 427,523 Platt, O. S. and Orford, J. M. do May 6, 421,014 Polk, W. R. Automatic fans Feb. 11, 408,846 Pond, C. H. Clocks, electric Aug. 13, 411,168 Pond, C. H. Clocks, electric Aug. 13, 411,168 Pond, C. P. Locomotion Oct. 29, 425,579 Popp, V. Meters Apr. 15, 424,726 Porter, M. D. Annunciators Apr. 1, 425,903 Porter, W. and George, H. Locomotion Apr. 15, 425,903 Porter, W. and George, H. Locomotion Apr. 15, 425,903 Porter, W. H. Incrustation Apr. 15, 429,584 Possons, N. S. Cut-outs, thermal June 3, 428,782 Potter, S. M. and Morgan, H. E. Motors May 27, 420,697 Powers, J. A. Cut-outs, mechanical July 9, 406,469 Powers, J. A. Cut-outs, mechanical July 9, 418,472 Pratt, C. R. Elevators Dec. 10, 417,086 Pratt, C. R. Elevators Dec. 10, 417,087 Pratt, C. R. Cod. Cod		Phillips W A	Covering cord	Oct 22 1889
407,447				Feb. 25, 1890
423,807 Pieper, H., fils Lights, are and incandescent Mar. 18, 423,873 Pieper, H., fils do Mar. 18, 490,498 Pierce, T. J Lights, incaudescent, special features Aug. 20, 429,058 Pierce, H. I Conductors, supports and insulators May. 27, 423,697 Pinolet, L. M Bells Mar. 18, 427,521 Platt, O. S. and Orford, J. M Cut-outs, mechanical May. 6, 427,522 Platt, O. S. and Orford, J. M do May. 6, 427,523 Platt, O. S. and Orford, J. M do May. 6, 421,014 Polk, W. R Automatic fans Feb. 11, 408,846 Pond, C. H Clocks, electric Aug. 13, 411,168 Pond, C. H Clocks, electric Aug. 13, 411,168 Pond, C. P Locomotion Oct. 29, 425,579 Popp, V Meters Apr. 15, 424,725 Porter, M. D Telegraphy, fire July. 23, 424,725 Porter, M. D Annunciators Apr. 14, 425,903 Porter, W. and George, H Locomotion Apr. 15, 429,584 Postors, N. S Cut-outs, thermal June. 3, 428,782 Potter, S. M. and Morgan, H. E Motors May. 27, 420,697 Powers, J. A Cut-outs, mechanical July. 9, 418,472 Pratt, C. R Meters Dec. 10, 417,086 Pratt, C. R Dec. 10, 417,086 Pratt, C. R Dec. 10, 417,086 Pratt, C. R Dec. 10, 417,087 Pratt, C. R Dec. 10, 417,087 Pratt, C. R Dec. 10, 400 Dec. 10, 417,086 Pratt, C. R Dec. 10, 417,087 Pratt, C. R Dec. 10, 417,086				
409,498 Pierce, T. J	423,807		Lights, are and incandescent	Mar. 18, 1890
429,058 Pierce, H. I. Conductors, supports and insulators. May 27, 423,697 Pinolet, L. M. Mar. 18, 27,521 Platt, O. S. and Orford, J. M. Cut-outs, mechanical. May 6, 427,522 Platt, O. S. and Orford, J. M. do. May 6, 427,523 Platt, O. S. and Orford, J. M. do. May 6, 421,014 Polk, W. R. Automatic fans. Feb. 11, 408,846 Pond, C. H. Clocks, electric. Aug. 13, 411,168 Pond, C. H. Aug. 13, 413,731 Poole, C. P. Locomotion Oct. 29, 425,579 Popp, V. Meters. Apr. 15, 407,416 Porter, M. D. Annunciators. Apr. 15, 424,725 Porter, M. D. Annunciators. Apr. 1, 425,694 Porter, W. and George, H. Locomotion. Apr. 15, 425,903 Porter, W. and George, H. Locomotion. Apr. 15, 425,903 Porter, W. H. Incrustation. Apr. 15, 429,584 Posons, N. S. Cut-outs, thermal. June. 3, 428,782 Potter, S. M. and Morgan, H. E. Motors. May 27, 406,468 Powers, J. A. Motors. Motors. Power		Pieper, II., fils	do	Mar. 18, 1890
423,697 Pinolet, L. M. Bells Mar. 18, 427,521 Platt, O. S. and Orford, J. M. Cut-outs, mechanical May 6, 427,522 Platt, O. S. and Orford, J. M. do May 6, 427,523 Platt, O. S. and Orford, J. M. do May 6, 421,014 Polk, W. R. Automatic fans Feb. 11, 408,846 Pond, C. H. Clocks, electric Aug. 13, 411,168 Pond, C. H. Clocks, electric Aug. 13, 411,168 Pond, C. H. Clocks, electric Aug. 13, 413,781 Poole, C. P. Locomotion Oct. 29, 425,579 Popp, V. Meters Apr. 15, 407,416 Porter, M. D. Telegraphy, fire July 23, 424,725 Porter, M. D. Annunciators Apr. 15, 424,726 Porter, M. D. Annunciators Apr. 14, 425,694 Porter, W. and George, H. Locomotion Apr. 15, 425,903 Porter, W. H. Incrustation Apr. 15, 425,903 Porter, W. H. Incrustation Apr. 15, 426,782 Potter, S. M. and Morgan, H. E. Motors 426,468 Powers, J. A Cut-outs, thermal June 3, 426,469 Powers, J. A Cut-outs, mechanical July 9, 416,469 Powers, J. A Cut-outs, mechanical July 9, 417,086 Pratt, C. R Elevators Dec. 10, 417,087 Pratt, C. R Dec. 10, 427,522 Potter, C. R Pratt, C. R Dec. 10, 428,682 Potter, C. R Dec. 10, 429,684 Porter, C. R Dec. 10, 420,697 Pratt, C. R Dec. 10, 421,086 Pratt, C. R Dec. 10, 422,687 Pratt, C. R Dec. 10, 423,687 Pratt, C. R Dec. 10, 424,726 Pratt, C. R Dec. 10, 424,726 Pratt, C. R Dec. 10, 425,687 Pratt, C. R Dec. 10, 426,787 Pratt, C. R Dec. 10, 427,587 Pratt, C. R Dec. 10, 428,782 Pratt, C. R Dec. 10, 429,687 Pratt, C. R Dec. 10, 429,687 Pratt, C. R Dec. 10, 420,687 Pratt, C. R Dec. 10,		Pierce, T. J	Lights, incaudescent, special features	Aug. 20, 1889
Platt, O. S. and Orford, J. M		Pinelet I M	Rolls	May 27, 1890
427,522				
427,523 Platt, O. S. and Orford, J. M				
408,846 Pond, C. H		Platt, O. S. and Orford, J. M	do	May 6, 1890
All, 168		Polk, W. R	Automatic fans	Feb. 11, 1890
Alight Poole, C. P. Locomotion Oct. 29, Apr. 15, Apr. 17, Apr. 18, Apr. 19, Apr.				
425,579 Popp, V				
407,416				
424,725				
425,694		Porter, M. D	Annunciators	Apr. 1, 1890
425,903 Porter, W. H. Incrustation Apr. 15,		Porter, M. D	do	Apr. 1, 1890
429,584 Possons, N. S. Cut-outs, thermal June 3, 428,782 Potter, S. M. and Morgan, H. E Motors May 27, 420,697 Powell, N. M. Alarms, burglar Feb. 4, 406,468 Powers, J. A Cut-outs, mechanical July 9, 406,469 Powers, J. A do		Porter, W. and George, H.	Locomotion	Apr. 15, 1890
A28,782 Potter, S. M. and Morgan, H. E Motors May 27, A20,697 Powell, N. M Alarms, burglar Feb. 4, Alarms, burglar Feb. 4,				
Alarms, burglar Feb. 4, 406,468 Powers, J. A Cut-outs, mechanical July 9, 418,472 Pratt, C. A Pratt, C. R Elevators Dec. 10, 417,087 Pratt, C. R Cut-outs, mechanical July 9, Meters Dec. 10, Dec.		Potter S M and Morgan H E	Motors	May 27 1890
406,468 Powers, J. A Cut-outs, mechanical July 9, 406,469 Powers, J. A do July 9, 418,472 Pratt, C. A Meters Dec. 31, 417,086 Pratt, C. R Elevators Dec. 10, 417,087 Pratt, C. R do Dec. 10,		Powell, N. M-	Alarms, burglar	Feb. 4, 1890
406,469 Powers, J, A		Powers, J. A	Cut-outs, mechanical	July 9, 1889
417,086 Pratt, C. R Elevators Dec. 10, 417,087 Pratt, C. R Dec. 10, Dec. 10,		Powers, J, A	do	July 9, 1889
417,087 Pratt, C. R		Pratt, C. A	Meters	Dec. 31, 1889
406 306 Pratt H.P. Madical and special holy year.		Prott C R	Elevators	Dec. 10, 1889
	406,306	Pratt. H. P.	Medical and surgical hadranean	July 2 1889
407,115 Pratt, H. P		Pratt, H. P-	do	July 16, 1889
407,116 Pratt, H. P July 16,		Pratt, H. P.	Electrodes	July 16, 1889
417.742 Prentiss, H. S Dec. 24.	417,742	Prentiss, H. S	Telegraphy, circuit-closers	Dec. 24, 1889
418,748 Prescott, G. B., jr Batteries, secondary, applications Jan. 7,		Prescott, G. B., jr	Batteries, secondary, applications	Jan. 7, 1890
424,997 Prest, J. E Apr. 8,	424,997	rest, J. E	Cordage, warping	Apr. 8, 1890

No.	Name.	Class.	Date.
422,445	Priest, E. D	Locomotion	Mar. 4, 1890
419,355	Pullman, A. B	Street cars, steam	Jan. 14, 1890
415,350	Pullman, H. B	Motors	
416,299 417,088	Pumpelly, J. K ——————————————————————————————————	Batteries, secondary	Dec. 3, 1889 Dec. 10, 1889
422,446	Pyle, G. C	Lights, arc, positive feed, gear-clutch	Mar. 4, 1890
417,089	Rae, F. B	Regulators	Dec. 10, 1889
421,304	Rae, F. B	Locomotion	Feb. 11, 1890
421,305 422,354	Rae, F. B	Telegraphy, lightniug arresters	Feb. 11, 1890 Feb. 25, 1890
423,391	Rae, F. B	Locomotion	Mar. 11, 1890
426,064	Rae, F. B	do	Apr. 22, 1890
426,065 426,066	Rae, F. B	Galvanometers Locomotion	Apr. 22, 1890 Apr. 22, 1890
428,136	Rae, F. B	do	
430,686	Rae, F. B.	Locomotives	June 24, 1890
429,478		Railway signals	
419,068 420,890	Randall, C. A	Printing, hand stamps	
411,611	Read, R. H	Motors, synchronizing	
411,612	Read, R. H	Telegraphy, multiplex	Sept. 24, 1889
406,769	Reams, J. M	Time alarms	
414,583 416,742	Redfield, C. L	Locomotion	
416,743	Redfield, C. L	do	Dec. 10, 1889
418,295	Redfield, C. L		
429,742 424,575	Redfield, C. L		Juue 10, 1890 Apr. 1, 1890
424,219	Reed, W. G		
415,335	Reese, J	Lights, incandescent	Nov. 19, 1889
408,356		Air and gas engines, explosive	
11,068 424,935	Reid, E. S	Conductors, underground	
429,815	Reilly, J. C	Conductors	Juue 10, 1890
11,053	Reitler, C. W	Medical and surgical, body-wear	Jan. 7, 1890
425,959 412,666	Renard, L. M. J. C. C	Batteries, galvanic Locomotion	Apr. 15, 1890 Oct. 8, 1889
420,101		do	
423,344	Retter, A	Drills	
425,630 425,631	Rice, D. H	Telephones, calls	Apr. 15, 1890 Apr. 15, 1890
416,745		Lamp shades	
416,746	Rice, E. W., jr	Regulators	Dec. 10, 1889
420,391	Rice, E. W., jr	Lights, incandescent, special features	Jan. 28, 1890
421,193 422,975	Rice, E. W., jr	Motors, alternating	
426,471	Rice, E. W., jr	Magneto-electric	Apr. 29, 1890
428,633	Rice, E. W., jr	Meters	May 27, 1890
43 0,320 411 ,930	Rice E. W. ir and Rohrer A. I.	Magneto-electric, couplings	Oct 1 1889
410,023		Speed measures	
420,102	Richard, F	Indicators	Jan. 28, 1890
409,755 430,688	Richards W S	RecordersSystems of distribution	Aug. 27, 1889
414,327	Richards, J. W. and Hall, J. B	Conductors, underground	Nov. 5, 1889
419,709	Richter, C	Locomotion	Jan. 21, 1890
409,237 409,756		do	
409,755		do	
411,301	Ries, E. E	Batteries, secondary, applications	Sept. 17, 1889
414,996	Ries, E. E	Car-brakes	Nov. 12, 1889
417,338		LocomotionCut-outs, mechanical	
408,671	Riggs, J. W	Railway signals	Aug. 6, 1889
406,771	Riker, A. L	Batteries, secondary	July 9, 1889
407,689 408,045	Riker A L	Locomotion Magneto-electric	July 23, 1889 July 30, 1880
411,613	Riker, A. L	Locomotion	Sept. 24, 1889
416,013	Riker, A. L	Magneto-electric	Nov. 26, 1889
413,812 419,710	Ritchie, A. M	Galvanometers	Oct. 29, 1889
427,014	Robbins, A. C	Telegraphy, fire, alarms and extinguishersIndicators	
422,976	Roberts, H. P	Locomotion	Mar. 11, 1890
	Roberts, I. L	Batteries, galvanic	Oct. 29, 1889
414,081	Pohorta W	Pattamon sacandana	Nov 10 1000
414,081 414,953 412,669	Roberts, W.	Batteries, secondaryBatteries, thermal	Nov. 12, 1889

No.	Name.	CLASS.	DATE.
420,833	Robertson, J. H	Telegraphy, automatic	Feb. 4, 1890
425,086	Rebertson, J. H	Telephones, systems	
418,227	Robinson, E. W.	Electrodes	Dec. 31, 1889
430,690	Robinson, W	Conductors, supports and insulators	Jnne 24, 1890
420,964	Robinson, W. H	Indicators	Feb. 11, 1890
410,293	Rockwell, F. C	Lights, incandescent, special features	Sept. 3, 1889
422,634	Rockwell, F. C	Lights, sockets and keys	Mar. 4, 1890
430,437	Rockwell, F. C.	Lights, incandescent, special features	
430,485	Rockwell, F. C.	Lights, sockets and keys	June 17, 1890
414,922	Rodman, S., jr	do	Nov. 12, 1889
418,069	Rogers, H. G	Store service	Dec. 24, 1889
418,071	Rogers, H. G	do	Dec. 24, 1889
418,070 $420,358$	Rogers, J. H	Telegraphy, printing	Dec. 24, 1889 Jan. 28, 1890
413,813	Root, H. C	Cut-outs, thermal	Oct. 29, 1889
430,486	Rose, H. J. F	Wash boilers	June 17, 1890
417,511	Rosebrugh, A. M. and T. R		Dec. 17, 1889
429,286	Rosenfield, W. W	Alarms	June 3, 1890
421,195	Ross, F. and Franzen, A		Feb. 11, 1890
423,956	Ross, R		Mar. 25, 1890
423,632	Rothenberg, W. F	Bridges, towers	Mar. 18, 1890
418,322	Rounseville, G. L. B		Dec. 31, 1889
426,395	Rudd, C. H	Railway signals	Apr. 22, 1890
429,483	Rudd, C. H	do	June 3, 1890
417,842	Runkel, J. P	Connectors	Dec. 24, 1889
418,987	Russell, E. C	Lights, arc, positive feed, gear-clutch	
428,145	Ruttan, H. W	Girders and columns	May 20, 1890.
416,754	Sack, J	Telephones, calls	Dec. 10, 1889
423,575	Sack, J	do	Mar. 18, 1890
408,753	Salisbury, W. S	Locomotion.	Aug. 13, 1889
408,754	Salisbury, W. S	Conductors	Aug. 13, 1889
430,974 418,474	Sanche, H	ConductorsLights, filaments and carbons	June 24, 1890 Dec. 31, 1889
406,775	Sautter, C. F	Thermostats	July 9, 1889
417,095	Saville, J. J. and Winspear, J. H.	Locomotion	
417,685	Sawyer, H. H	Lights, incandescent	
412,713	Sayers, W. B. and Sturge, W. H	Drop-lights and hangers	
428,420	Scott, A. I	Medical and surgical, body-wear	
410,652	Scott, G. A.	do	Sept. 10, 1889
413,735	Schaefer, L	Cut-outs, thermal	
416,862	Schardt, B. and Lutzenberger, W	Lights, arc, special features	
420,314	Schefbauer, R	Lights, arc, gravity feed, gear-clutch	
424,729	Scherer, F	Applications, general	
406,961 408,855	Schlesinger, W. M	Regulators	July 16, 1889 Aug. 13, 1889
423,959	Schmanger T	Batteries, galvanic	
406,776	Schmid, A		July 9, 1889
406,777	Schmid, A		July 9, 1889
406,858		do	July 9, 1889
406,859		do	July 9, 1889
416,240	Schmid, A	do	Dec. 3, 1889
428,289		do	May 20, 1890
421,320		do	Feb. 11, 1890
417,794	Schmid, A. and Tesla, N	do	Dec. 24, 1889
408,992	Schmidt, J. M		
414,085 428,256	Schneider, F. W. A Schneider, J		
425,004	Schnitz, R	Time alarms	
408,138	Schoop, P	Batteries, galvanic	
408,358	Schroeder, C. A. J. H	Lights, filaments and carbons	Aug. 6, 1889
409,508	Schwenke, P	Magnetic locks and bolts	
411,133	Scribner, C. E	Annunciators	
415,571	Scribner, C. E	Lights, arc, gravity feed, clutch	
415,572	Scribner, C. E	do	
415,573	Scribner, C. E	Telephones, systems	37 30 3000
415,574	Scribner, C. E	Telegraphy, fire	Nov. 19, 1889
416,275	Scribner, C. E	Telephones, systems	Dec. 3, 1889
416,808	Scribner, C. E	do	
416,809	Scribner, C. E	do	
418,757	Scribner, C. E	Lights, arc	
418,758	Scribner, C. E		
420,109 423,494	Scribner, C. E		Jan. 28, 1890 Mar. 18, 1890
423,637	Scribner, C. E	Annunciators Lights, arc, special features	Mar. 18, 1890
423,638	Scribner, C. E	Cut-outs, electro-magnetic	
427,120	Scribner, C. E	Telephones, systems	
427,121		do	May 6, 1890

No.	Name.	CLASS.	DATE.
	MAME.	CLASS.	DATE.
427,122	Scribner, C. E	Magneto-electric, hand machines	
427,123 427,194	Scribner, C. E	Telephones, systems	May 6, 1890 May 6, 1890
427,621	Scribner, C. E	do	May 13, 1890
427,622 427,623	Scribner, C. E	Telephones, switch-boards	May 13, 1890 May 13, 1890
427,624	Scribner, C. E	do	
427,917	Scribner, C. E	do	May 13, 1890
428,698 412,045	Scribner, C. E.	Telegraphy, fire	
414,659	Seafert, W	Magneto-electric	Nov. 5, 1889
430,696	Seamon, W. H.	Conductors, insulators	June 24, 1890
407,454 419,365	See, J. W Seelv, J. A	Telegraphy, lightning arresters	
420,171	Seely, J. A	do	
423,449	Seely, J. A	Conductors	Mar. 18, 1890
424,229 415,738	Seely, J. A	Cut-outs, thermal	
420,834	Seib, G. A	Magnetic locks and bolts	
414,130	Seifert, F. W. R	Lights, arc, gravity feed, clutch	Oct. 29, 1889
421,882 413,308	Seiler, P	Telegraphy, fire Telephones, magnetic	
411,474	Sellon, J. S.	Lights, filaments and carbons	Sept. 24, 1889
420,469	Serrell, L. W. and Lufkin, H. L.	Regulators	
425,961 411,935	Seubel, P Seymour, A. P	Conductors, undergroundCut-outs, mechanical	
411,936	Seymour, A. P.	Lights, arc, special features	
427,195	Seymour, A. P.	Tagonation	
423,495 420,393	Seymour, H. A. Shafer, B. F.	Locomotion Telegraphy, transmitters	
422,981	Shafer, B. F	Annunciators	Mar. 11, 1890
413,568	Shaffer, C. H	Thermostats	
426,688 411,970	Shaffer, C. H Shallenberger, O. B	Telegraphy, fire, alarms and extinguishers Lighting, systems	
412,932	Shallenberger, O. B	Transmission of power	Oct. 15, 1889
412,933 414,595	Shallenberger, O. B	Magneto-electric	
419,367	Shallenberger, O. B	do	
426,335	Shallenberger, O. B	do	Apr. 22, 1890
413,309 417,516	Shapleigh, WShawhan, J. F	Metal founding, soft metals Lights, are, positive feed	
420,740	Sheffield, A. J	Medical and surgical, body-wear	
424,827	Shelton, W. J	do	
421,439 430,487	Shipway, T. H. and Dowdell, J. R	AnnunciatorsLamps and gas fittings, candlesticks	June 17, 1890
407,496	Short, S. H	Locomotion	July 23, 1889
407,745	Short, S. H	do	
408,265 415,070	Short, S. H.	Magneto-electric Locomotion	
417,747	Short, S. H	do	Dec. 24, 1889
422,096 422,645		do	
427,628	Short, S. H	Railways, systems, overhead, trolleys	
429,817	Shubert, H. C	Alarms, bnrglar	June 10, 1890
415,577 415,576	Siemens, W	MetersElectrolysis	
417,101	Siersdorfer, M	Extinguishers, gas	
429,703	Siliceo, J., jr	Batteries, galvanic	June 10, 1890
425,911 425,912	Sill, R. V. R	Locomotiondo	
406,599	Silvey, W. L	Magneto-electric	
429,067	Simmons, C. H	Bridges, girders and columns	
409,375 424,363	Simons, R. L Singer, W. F	Conductors, lead-covered Thermostats	
425,089	Singer, W. F	Telegraphy, fire, alarms and extinguishers	Apr. 8, 1890
415,578 407,618	Skelton, F. A	Telegraphy, repeaters	Nov. 19, 1889
407,618	Slattery, M. M. M.——————————————————————————————	Induction coils	
410,860	Slattery, M. M. M.	do	Sept. 10, 1889
424,364	Slentz, E. P. and McGrew, J. B.	Locomotion	Mar. 25, 1890
$\frac{416,148}{407,455}$	Smith, A. T	Clocks, electric	Nov. 26, 1889 July 23, 1889
425,913	Smith, A. J	Conductors, underground	Apr. 15, 1890
411,689 411,737	Smith, C. C. and Martin, H. W.	Medical and surgical, body-wear	Sept. 24, 1889
410,037	Smith, D. W	Heaters Batteries, secondary	Sept. 24, 1889 Aug. 27, 1889
110,001			

No.	Name.	Class.	DATE.
418,766	Smith, J. B		
408,327	Smith, J. R	Telephones, systems, automatic	
424,734	Smith, L. T		Apr. 1, 1890
410,212 416,381	Smith, R. D. O		
408,676	Smith, T. J.	Bells	
423,286		Telegraphy, fire, alarms and extinguishers	
423,286 412,345	Smith, W. F	Batteries, secondary	
412,346	Smith, W. F	do	
412,347	Smith, W. F		
415,981		Batteries, secondary	
416,126 420,214	Smith, W. F	do Meters	
422,456	Smith, W. F		Mar. 4, 1890
422,895	Smith, W. F		
427,710	Smith, W. F	Batteries, secondary	May 13, 1890
431,011	Smith, W. J. and Fox, J. W	Railway signals	June 24, 1890
408,901	Snedekor, C. T.	Couductors	Aug. 13, 1889
413,331		Scale beams	
429,068	Sommerville, A. R	Electrodes	May 27, 1890
419,727 419,728		Batteries, secondary	
420,975		do	
422,457		do	
423,091	Sorley, C		
421,983	Souders, M. M	Railway signals	
414,339	Spaulding, H. C	Meters	
426,338	Spear, A. D		
407,945	Specr, A		
408,762 416,513	Speicher, J	Telcgraphy, firedo	Dec. 3 1889
420,173	Speicher, J.		
426,691	Speicher, J. and Fearey, F. T	do	
417,753	Spellier, L. II		
430,094	Spencer, A. D.	Metal working, tools and implements	
417,290	Sperry, E. A	Batteries, galvanic	
418,824	Sperry, E. A	Telegraphy, lightning arresters	Jan. 7, 1890
420,117 427,711	Spike, C. J. and McLeod, H. V.	Regulators	May 13 1890
406,600	Spraone F. J.	Locomotion	July 9, 1889
408,544	Sprague, F. J	do	
413,151	Spragne, F. J	do	Oct. 15, 1889
424,436	Sprague, F. J.	do	Mar. 25, 1890
428,732	Sprague, F. J		
429,327	Spragne, F. J.		
414,172 427,445	Spragne G	LocomotiouConductors, underground	May 6 1890
429,251	Stafford, J	do	June 3, 1890
423,707		Bells	
422,651	Stanley, G. E.	Insulators	Mar. 4, 1890
419,730	Stanley, L. T	Batteries, galvanic	Jan. 21, 1890
419,731		Induction coils	
418,659 426,573		Regulators, alternating	
$\frac{420,575}{426,574}$		Regulatorsdo	
428,574	Stanley, W., ir	Induction coils	May 20, 1890
428,575	Stanley, W., jr	Inductoriums, transformers, stationary.	May 20, 1890
410,656	Statter, J. G	Magneto-electric	Sept. 10, 1889
422,164	Stearns, C. K. and Wheeler, G. K	Locomotion	Feb. 25, 1890
429,705		Photography, cameras	
427,928		Steam boilers, coverings	
420,611 424,371	Stephenson J	Medical and surgical, body-wear Street cars, steam	Mar 25 1890
424,372	Stephenson J	do	Mar. 25, 1890
424,373	Stephenson, J.	do	Mar. 25, 1890
424,374	Stephenson, J.	Locomotion	Mar. 25, 1890
411,908	Stevens, F	Valve controllers	Oct. 1, 1889
407,746	Stevens, J. W	Closet cisterns	July 23, 1889
428,358	Stevens, N. P.	Lights, arc, special features	May 20, 1890
425,466	Stowart I	Telegraphy, railway-car	Apr. 15, 1890
420,705 420,706		Lights, sockets and keysdo	
421,630		do	
421,114		Telephones, switch-boards	
420,635	Stieringer, L	Insulators	Feb. 4, 1890
	0.1. 1.70	Doilesons automotic sismale	D 17 1000
417,525 428,970	Stitzel, F	Railway signals	Dec. 17, 1889

No.	NAME.	CLASS.	DATE.
417,526	Stitzel, F. and Weinedel, C	Railways, automatic signals	Dec. 17, 1889
428,576	Stitzel, F. and Weinedel, C	Automatic signal-setting apparatus	May 20, 1890
413,795	Stockwell, J. O. and Barrett, A	Anti-induction devices	Oct. 29, 1889
416,189	Stone, J. B	Cords and ropes	
421,781 419,733	Stoughton, J. A.——————————————————————————————————	ConductorsLights, incandescent, special features	
-418,853	Storey, I. E	Magneto-electric	
418,855	Storev, I. E	Lights, sockets and keys	Jan. 7, 1890
418,856	Storey, I. E	Locomotion	
420,500	Storey, I. E	Drillsdo	
408,269 428,427	Story, R. J. and J. T., Fox, A. E. and Hill, G. J.	Indicators	
421,449	Stout, J. V	Valve-controllers	
421,530	Straight, G. H.	Annunciators	Feb. 18, 1890
411,230	Streeper, D. H	Alarms	Sept. 17, 1889
412,563 427,204	Streeper, D. H. Stut, J. C. H.	Alarms, burglar———————————————————————————————————	
422,654	Suren, N. H	Annunciators	
11,047	Swan, J. W	Batteries, secondary	Dec. 17, 1889
417,688	Tatham, J	Conductors, underground	Dec. 17, 1889
416,971	Taylor, E. W	Alarms, burglar	Dec. 10, 1889
428,026 $420,255$	Taylor, F. C. and Hurd, J. R.——————————————————————————————————	Fulling Telephones, calls	May 13, 1890 Jan. 28, 1890
411,840	Taylor, R. S. and Slattery, M. M. M.	Motors, alternating	Oet. 1, 1889
411,770	Tebbs, H. S., Lane, N. C. and Coombs, V	Telegraphy, keys	Sept. 24, 1889
406,968	Tesla, N	Magneto-electric	July 16, 1889
413,353	Tesla, N	Systems of distribution	
416,191	Tesla, N	Motors, alternatingdo	
416,192 416,193	Tesla, N	do	
416,194	Tesla, N	do	
416,195	Tesla, N.	do	
418,248	Tesla, N	do	Dec. 31, 1889
424,036	Tesla, N	Programa and to alcothic devices	Mar. 25, 1890
428,057 414,343	Tesla, N	Pyro-magneto electric devices	May 13, 1890 Nov. 5, 1889
420,840	Thomas, M. E	Medical and surgical, body-wear	Feb. 4, 1890
417,117	Thompson, A. C. and Newton, H. E	Alarms	Dec. 10, 1889
407,973	Thompson, A. T	Drop-lights and hangers	July 30, 1889
406,969 415,007	Thompson, C. H Thompson, D. W	Batteries, secondary Thermostats	July 16, 1889 Nov. 12, 1889
414,267	Thompson, H. E	do	
425,269	Thompson, M. E	Meters	Apr. 8, 1890
425,270	Thompson, M. E	do	Apr. 8, 1890
426,650	Thompson, R. W	Locomotion	Apr. 29, 1890
408,678 412,140	Thompson, W	Cut-outs, mechanical Galvanometers	
416,654	Thompson, W	do	
416,655	Thompson, W.	do	
420,894	Thompson, W	Rheostats	
424,082	Thompson, W and Control	Locomotion	Mar. 25, 1890
420,217 411,400		Batteries, galvanic	
407,844		Motors, alternating	
409,714	Thoruson, E	Induction coils	Aug. 27, 1889
413,292	Thomson, E		
413,294 414,266	Thomson, E	Locomotion	
415,747	Thomson, E	Meters	
415,748	Thomson, E	do	
415,749	Thomson, E	Inductoriums, transformers, stationary	Nov. 26, 1889
416,350	Thomson, E	Meters	
416,762 418,249	Thomson, E	Telegraphy, lightning arresters	
420,396	Thomson, E	Inductoriums, transformers, stationary	Jan. 28, 1890
421,207	Thomson, E	Cut-outs, electro-magnetic	Feb. 11, 1890
421,208	Thorason, E	Systems of distribution	Feb. 11, 1890
422,550 423,965	Thomson, E	Magneto-electric	Mar. 4, 1890
423,966	Thomson, E	Applications, general	
423,967	Thomson, E	do	
425,470	Thomson, E	Systems of distribution	
425,640	Thomson, E	Locomotion	Apr. 15, 1890
426,082	Thomson, E	Cut-outs, thermal	Apr. 22, 1890
428,647 428,648	Thomson, E	Systems of distribution Inductoriums, transformers, stationary	May 27, 1890
428,649	Thomson, E	Meters	May 27, 1890
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No.	Name.	CLASS.	DATE.
428,650	Thomson, E	Motors, alternating	May 27, 1890
428,651	Thomson, E	Systems of distribution	May 27, 1890
428,653	Thomson, E	Telegraphy, lightning arresters	May 27, 1890
428,704	Thomson, E	Cut-outs, mechanical	May 27, 1890
428,705	Thomson, E	Regulators	May 27, 1890
430,357	Thomson, E	Lights, arc, positive feed	June 17, 1890
428,652	Thomsou, E. and Alton, G. H	Lights, sockets and keys	May 27, 1890
410,468	Thomson, E. and Rice, E. W., jr	Induction coils	
413,293	Thomson, E. and Rice, E. W., jr	Systems of distribution	
425,588	Thomson, E. and Rice, E. W., jr	Lights, sockets and keys	Apr. 15, 1890
430,326	Thomson, E. and Rice, E. W., jr	Cut-outs, electro-magnetic	June 17, 1890
430,327	Thomson, E. and Rice, E. W., jr	Regulators	June 17, 1890
430,328	Thomson, E. and Rice, E. W., jr	Motors, alternating	June 17, 1890
422,999	Thomson, E. and Rohrer, A. L	Magneto-electric	Mar. 11, 1890
415,305 413,984	Thomson, E. and Tregoning, J Thone, F	Soldering clamps Regulators	Nov. 19, 1889 Oct. 29, 1889
418,426	Thone, F	Lights, sockets and keys	Dec. 31, 1889
416,873	Tilghman, B. C	Heaters	Dec. 10, 1889
423,708	Tirmann, H	Friction generators	
416,243	Tirrell, J. P	Bells	
421,636	Titus, E. C	Telephones, switches	
425,917	Tortora, E	Couductors	
423,886	Toulmin, M	Fences, railway gates, electrie	Mar. 18, 1890
426,222	Tower, G. A.	Railway signals	Apr. 22, 1890
412,567	Tracy, P. J	Regulators	Oct. 8, 1889
426,479	Tremaine, H. A	Lights, filaments and carbons	
407,799	Trowbridge, J. and Sheldon, S	Telephones, magnetie	July 30, 1889
413,112	Tudor, H	Batteries, secondary	Oct. 15, 1889
421,088		Conductors, underground	
406,797		Locomotion	
406,798		do	
407,749 408,638		do	
408,639	Van Depoele, C. J	do	Aug. 6, 1889 Aug. 6, 1889
408,640		do	
408,641		Meters, alternating	
408,642	Van Depoele, C. J	do	Aug. 6, 1889
409,156		Locomotion	
413,986		Motors, alternating	
414,609	Van Depoele, C. J	Locomotion	Nov. 5, 1889
417,120	Van Depoele, C. J	do	Dec. 10, 1889
417,121	Van Depoele, C. J	do	Dec. 10, 1889
417,122		do	
417,654 422,265	Van Depoele, C. J	do	Dec. 17, 1888
422,266	Van Depoele, C. J	Magneto-electric Locomotion	Feb. 25, 1690
422,200	Van Depoele, C. J	Transmission of power	Mar 4 1800
422,856	Van Depoele, C. J.	and a substitution of power substitution of	Mar. 4, 1890
422,857		do	
422,858		(lo	
422,859		do	
422,860	Van Depoele, C. J	do	Mar. 4, 1890
424,380	Van Depoele, C. J	Locomotion	Mar. 25, 1890
424,381		do	
424,695	Van Depoele, C. J	do	Apr. 1, 1890
429,745	Van Depoele, C. J	Connectors	June 10, 1890
429,746	Van Depoele, C. J	Electric locomotives	June 10, 1890
424,910		Locomotion	
424,911 429,747	Van Denoele C I	Pailways ovetems telphon	Apr. 1, 1890
429,981	Van Depoele, C. J	Railways, systems, telpher	June 10, 1890
406,377		Anuunciators	
406,975	Van Gestel, J. T	Batteries, secondary	July 16, 1889
408,768	Van Gestel, J. T	Magneto-electric	Aug. 13, 1889
410,049	Van Gestel, J. T	Locomotion	Aug. 27, 1889
410,680	Van Gestel, J. T	Batteries, secondary	Sept. 10, 1889
413,636	Van Gestel, J. T	Lights, incandescent	Oct. 22, 1889
424,739	Van Nuis, C. S	Cut-outs, mechanical	Apr. 1, 1890
409,157	Van Kysselberghe, F	Telegraphy, reed	Aug. 13, 1889
409,437	Villiam Stood F and Halaman E B	Dental instruments	Aug. 20, 1889
422,326	Vinners-Sieau, F. and Heagman, E. K.	Vending apparatus	Feb. 25, 1890
429,801 430,156	Voelker W L	Telephones, magnetie Lights, incandescent Lights	June 10, 1890
423,004	Vogler, W	Locomotion	Mar 11 1890
		do	
420,UU0			
423,005 417,758	Von der Kammer, J	Cut-outs, thermal	Dec. 24, 1889

No.	Name.	CLASS.	DATE.
422,746	Von Dolivo-Dobrowolsky, M	Inductoriums, transformers, rotary	Mar. 4, 1890
427,978	Von Dolivo-Dobrowolsky, M	Motors, alternating	May 13, 1890
412,141 428,290	Von Hefner-Alteneck, F. and Hoffman, C Von Siemens, E. W	Lights, arc, gravity feed, gear-clutch Meters:	Oct. 1, 1889 May 20, 1890
410,053	Voss, R	Friction generators	Aug. 27, 1889
423,400	Voss, D. C	Locomotion	Mar. 11, 1890
407,801	Votey, E. S	Self-playing instruments	July 30, 1889
407,802 430,096	Votey, E. S	Organ-bellows Cut-outs, electro-magnetic	
430,551	Wade, G. H	Meters	June 17, 1890
421,457	Wadleigh, M	Medical and surgical, body-wear	
426,153 $429,490$	Wagemann, E	Inductoriums, transformers, stationary Magneto-electric	Apr. 22, 1890 June 3, 1890
429,825	Wagemann, E	Regulators	June 10, 1890
419,740	Wagner, F. C.	do	Jan. 21, 1890
406,489	Waldron, C. F	Telegraphy, keys Batteries, secondary	July 9, 1889
410,054 406,678	Walker, G. W	Meters	July 9, 1889
423,361	Wallace, J. S.	Applications, general	Mar. 11, 1890
406,978	Wallace, T	Batteries, secondary, applications	July 16, 1889
421,790 $422,556$	Walsh, P. B. Walter, H. E.	Motorsdo	Feb. 18, 1890 Mar. 4, 1890
421,791	Walter, W. C	Railway signals	Feb. 18, 1890
428,433	Walton, R. T	Igniting devices, manual	May 20, 1890
427,138 429,396	Wamsley, W. F. and McIntosh, T.	Clocks, electric	May 6, 1890
409,259	Ward, C. A	Batterics, galvanic	June 3, 1890 Aug. 20, 1889
413,215	Warde, G. H	Conductors, underground	Oct. 22, 1889
424,152	Wardwell, H. H	Batteries, secondary	Mar. 25, 1890
$411,311 \\ 422,672$	Ware, E. R. Waring, J	Thermostats	Sept. 17, 1889 Mar. 4, 1890
420,422	Warner, E. P.	do	Jan. 28, 1890
425,058	Warner, E. P.	Telephones, switches	Apr. 8, 1890
425,963 426,155	Warner, E. P	Street lamps	Apr. 15, 1890
427,530	Warner, E. P-	Regulators	Apr. 22, 1890 May 6, 1890
428,189	Warner, E. P.	Telephones, systems	May 20, 1890
426,156	Warrell, F. G		Apr. 22, 1890
422,862 422,863	Washburn, G. A.	Regulators Magneto-electric	Mar. 4, 1890 Mar. 4, 1890
420,398	Waterhouse, A. G.	Regulators	Jan. 28, 1890
420,924	Waterhouse, A. G.		Feb. 4, 1890
427,208 428,979	Waters, B. E	Telephones, systems Insulators	May 6, 1890 May 27, 1890
426,343	Watson, J. A	Magneto-electric	
415,593	Watson, J. E	Batteries, galvanie	Nov. 19, 1889
424,387 429,982	Watton N. M		Mar. 25, 1890
406,681	Watterhouse, E. R	Telegraphy, keysLightning rods	June 10, 1890 July 9, 1889
429,074	Webb, F. W. and Thompson, A. M.	Railway signals	May 27, 1890
416,131	Weeden, H. C	Urinals	Nov. 26, 1889
416,138 406,803	Weens D G	Locomotion	July 9, 1889
406,804		do	
406,805	Weems, D. G	do	July 9, 1889
406,806 425,964		do	
425,965	Weems, D. G	Railways, rails	Apr. 15, 1890
425,966	Weems, D. G	Locomotion	Apr. 15, 1890
424,743 413,270		Telegraphy, fire, alarms and extinguishers	
408,151	Welcker, H	Fire-escapes, flexible ladders Medical and surgical, body-wear	July 30, 1889
428,735	Weller, F. A	Magneto-electric	May 27, 1890
408,778	Wellman, H. P	Ferry guards	Aug. 13, 1889
426,576 $415,752$	Wesslau, B. H	Magneto-electricConductors, underground	
416,143	Wesslau, B. H	do	Nov. 26, 1889
416,144	Wesslau, B. H	do	Nov. 26, 1889
415,751 427,489	Westinghouse G ir	Votors	Nov. 26, 1889
428,435	Westinghouse, G., jr	Meters	May 6, 1890 May 20, 1890
427,022	Weston, E	Galvanometers	Apr. 29, 1890
415,262	Wetmore, J. A	Conductors, lead-covered	Nov. 19, 1889
421,535 425,720	Wheeler, F. C	Locomotiondodo	Feb. 18, 1890 Apr. 15, 1890
411,539	Wheeler, G. A	Conductors, underground	Sept. 24, 1889
409,170	Wheeler, M. C. and Clark, A. M.	Valve-controllers	Ang. 20, 1889

No.	Name.	CLASS.	DATE.
410,305	Wheless, M	Telephones, electric	Sept. 3, 1889
413,637	Wheless, M	Locomotion	
417,763 $427,024$	Whiton, F. J Whitaker, H. B	Applications, generalCut-outs, mechanical	
421,214	White, G. W	Telegraphy, relays and sounders	Feb. 11, 1890
419,808	White, Le R. S.	Motors	Jan. 21, 1890
421,800	Whittingham G. H.	Telephones, details	Feb. 18, 1890
408,333 415,487	Whittingham, G. H	Regulatorsdodo	Aug. 6, 1889 Nov. 19, 1889
423,462	Whittingham, G. H	Motors	Mar. 18, 1890
419,902	Wider, E		
415,758 - 411,313	Wiesebroek, F. W. and Huber, EWightman, M. J.	Telethermometers Locomotion	Nov. 26, 1889 Sept. 17, 1889
411,314	Wightman, M. J		Sept. 17, 1889
411,947	Wightman, M. J	Rheostats	Oct. 1, 1889
420,370 423,975	Wightman, M. J	Lights, sockets and keys	Jan. 28, 1890 Mar 25, 1890
430,329	Wightman, M. J		
426,348	Wightman, M. J. and Thomson, E	Magneto-electric	Apr. 22, 1890
418,258	Wiley, E. C	Railway signals	Dec. 31, 1889
429,330 409,088	Wilkins, T. M. and Reid, A. H	Voting machinesAlarms	Aug. 13, 1889
408,279	Williams, J. B.	Batteries, galvanic	Aug. 6, 1889
420,648	Williams, J. B		
420,649 419,166	Williams, J. M	IndicatorsLocomotion	Feb. 4, 1890 Jan. 7, 1890
428,540	Williams, R. E	Medical and surgical, body-wear	May 20, 1890
421,801	Willms, C. and Leibig, G. A., jr	Batteries, galvanic	Feb. 18, 1890
409,891		RecordersElectrolysis	Aug. 27, 1889 June 17, 1890
430,453 414,741	Wilson, G. W	Lights, incandescent	Nov. 12, 1889
414,742	Wilson, G. W	do	Nov. 12, 1889
414,961		Telephones, supports	Nov. 12, 1889
406,809 411,407		Recorders	July 9, 1889 Sept. 17, 1889
417,304	Wilson, J. C		Dec. 17, 1889
417,305	Wilson, J. C		Dec. 17, 1889
426,554 $426,555$	Wilson, J. C	Morse registers	Apr. 29, 1890 Apr. 29, 1890
428,989	Wilson, W. H		May 27, 1890
413,879	Winder, W.	Connectors	
430,979 411,629		Alarms, burglar Magneto-clectric	June 24, 1890 Sept. 24, 1889
412,349		do	
412,350	Winkler, C. F	do	Oct. 8, 1889
412,351 412,352		do	
412,353	Winkler, C. F	do	
423,101	Winslow, W. H	Coating with metal	Mar. 11, 1890
417,695		Telegraphy, lightning arresters	
417,694 427,387	Winton, H. D	Railway signals	
414,356	Wirt, C	Telegraphy, lightning arresters	Nov. 5, 1889
421,464		Locomotion	
407,386 410,228		Solution and precipitationSolution, precipitation, and chlorination	
429,104	Witthaus, E. L	Conductors, underground	May 27, 1890
410,059	Wolf, J. J	Telephones, supports	Aug. 27, 1889
423,299 417,458	Wolff C. H	Telephones, detailsBatteries, galvanic	Dec. 17, 1890
419,487	Wollensak, J. F	Telegraphy, circuit-closers	Jan. 14, 1890
421,339	Wollensak, J. F	Alarms, burglar	Feb. 11, 1890
421,340 421,802	Wollensak, J. F.	Telegraphy, circuit-closers	Feb. 11, 1890
422,360	Wollin, W. F. and Werline, E. H	Lights, sockets and keys	Feb. 25, 1890
428,030	Wolstencroft, J. and Soley, W. H	Fire-arms, ball traps	May 13, 1890
418,483	Woolf, A. E	Batteries, secondary	Dec. 31, 1889
$\frac{420,850}{420,851}$	Wood, F. B	Recordersdo	Feb. 4, 1890 Feb. 4, 1890
420,852	Wood, F. B	do	Feb. 4, 1890
424,635	Wood, F. B	Telephones, calls	Apr. 1, 1890
406,492 406,493	Wood, J. J.	Magneto-electricRegulators	
406,494	Wood, J. J	do	July 9, 1889
407,914	Wood, J. J.	Lights, arc, special features	July 30, 1889
412,354		Galvanometers	

No.	NAME.	Class.	DATE.
417,915 418,301 418,303 420,138 423,102 426,405 426,699 424,441 424,442 423,014 407,272 430,722 415,600 422,681 413,703 419,094 424,665 414,624 415,990 413,008 425,923 408,785	Wood, J. J. Wood, W. M. Wood, W. M. Woodbury, L. S. Woolley, L. G. Word, J. J. Wotton, J. A. and Polk, W. R., jr. Wray, J. C. Wurts, A. Wynne, F. Young, C. G. Young, C. I. Zigang, J. P. Zipernowsky, C. Zipernowsky, C., Déri, M. and Bláthy, O. T.	Heaters Projectiles Bells Motors Lights, arc, gravity feed, gear-clutch Batteries, secondary Magneto-electric	July 30, 1889 Dec. 31, 1889 Dec. 31, 1889 Dec. 31, 1889 Jan. 28, 1890 Mar. 11, 1890 Apr. 29, 1890 Mar. 25, 1890 Mar. 25, 1890 Mar. 11, 1890 July 16, 1889 June 24, 1890 Nov. 19, 1889 Mar. 4, 1890 Oct. 29, 1889 Jan. 7, 1890 Apr. 1, 1890 Nov. 5, 1889 Nov. 26, 1889 Oct. 15, 1889 Apr. 15, 1890 Aug. 13, 1889

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